EVIX®

User's manual

ER-401
ER-801

COMMENTS AND WARNINGS

EMC (2004/108/EC) and LVD (2006/95/EC) Directives

CE Marking

Our products are manufactured to comply with requirements of following directives and national regulations implementing the directives:

- Electromagnetic compatibility EMC 2004/108/EC.
- Low voltage LVD 2006/95/EC with further amendment. The Directive applies to electrical equipment designed for use with a voltage rating of between 50VAC and 1000VAC as well as 75VDC and 1500VDC.

WEEE Directive 2002/96/EC

Information on Disposal for Users of Waste Electrical and Electronic Equipment

This appliance is marked according to the European Directive on Waste Electrical and Electronic Equipment (2002/96/EC) and further amendments. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.
The symbol on the product, or the documents accompanying the product, indicates that this appliance may not be treated as household waste. It shall be handed over to the applicable collection point for the waste electrical and electronic equipment for recycling purpose. For more information about recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

RoHS Directive 2002/95/EC

Concerning for human health protection and friendly environment, we assure that our products falling under RoHS Directive regulations, regarding the restriction of the use of hazardous substances in electrical and electronic equipment, were designed and manufactured in compliance with mentioned regulation. Simultaneously, we claim that our products were tested and do not contain hazardous substances exceeding limits which could have negative impact on human health or natural environment.

Information

The device, as a part of professional CCTV system used for surveillance and control, is not designed for self installation in households by individuals without technical knowledge.

The manufacturer is not responsible for defects and damages resulted from improper or inconsistent with user's manual installation of the device in the system.

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SAFETY REQUIREMENTS

ATTENTION!

PRIOR TO UNDERTAKING ANY ACTION THAT IS NOT PROVISIONED FOR THE GIVEN PRODUCT IN ITS USER'S MANUAL AND OTHER DOCUMENTS DELIVERED WITH THE PRODUCT, OR THAT ARISES FROM THE NORMAL APPLICATION OF THE PRODUCT, ITS MANUFACTURER MUST BE CONTACTED OR THE RESPONSIBILITY OF THE MANUFACTURER FOR THE RESULTS OF SUCH AN ACTION SHELL BE EXCLUDED.

1. The installation of ER-401 or ER-801 should be made by a qualified service person or a professional safety system installer.

2. Recorders mustn't be placed in places where ventilating holes are partially or fully covered.

3. User's interference inside the device is not allowed and is unnecessary as it does not have any systems which require adjusting or which are suitable for self-repair. You mustn't dismantle the recorder or remove any single fastening screws. If any repairs are necessary contact the service. The device must be take care of and protected against any mechanical damage.

4. The recorder has to be protected against humidity and dust. In case the recorder had a contact with water react immediately: switch off the power supply and contact the authorised Novus service. If the device gets dirty it might get damaged or electrocute someone.

5. The device can only be cleaned with a damp cloth after the power supply has been switched off. Avoid strong detergents (liquids and sprays). Mild detergents can be used if the recorder becomes very dirty.

6. Power supply unit cords and signal cords should be laid in a way that eliminates the risk of mechanical damage; special attention should be paid to the plug. Be careful not to overload sockets and extension cords so that there is no fire.

7. To avoid recorder's damage vision and control signals should be equipped with systems protecting against disturbances, over voltage and atmospheric discharge that are in compliance with Polish regulations. It is also advised to use ground loop isolators.

8. The device mustn't be used in conditions which do not fulfil operating requirements as far as power supply, relative humidity or air temperature are concerned.

9. You cannot allow any metal objects get inside the recorder. It might cause serious damage. If a metal object gets inside the device contact the authorised Novus service immediately.

10. The manufacturer does not bear responsibility for damage or loss of data stored on HDDs or other media occurred during the usage of the product.

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1. FOREWORD INFORMATION

1.1. Main characteristics

- Quadruplex: simultaneous recording, live monitoring or playback, backup and networking
- Linux-based operating system
- Real-time display
- Recording speed: up to 100 fps - ER-401
- Recording speed: up to 200 fps - ER-801
- H.264 compression
- Recording resolution: 720 x 576, 720 x 288, 360 x 288
- 1 spot monitor output
- Advanced schedule recording & motion detection functions
- Pre-alarm & post-alarm functions
- audio recording
- PTZ control directly from the device or via the network
- Control protocols: N-Control, Pelco-D, Pelco-P and other
- Backup: onto USB Flash Memory through USB port, & via the network
- Backup into *.AVI file
- Advanced search of recorded images
- Networking (live monitoring, playback, archiving & alarm event e-mail notification, changing DVR's settings)
- Dualstream; two independent network streams SUBSTREAM and MASTERSTREAM
- Software: CMS application for remote administration, live monitoring and recorded data search with built-in module for graphical object visualization (maps)
- User friendly multi-lingual graphical user interface
- Smart phones support
- Covert camera function
- Event log
- IR remote control and PC mouse control (in-set included)
- Power supply: 12 VDC (100~240 VAC/12VDC PSU in-set included)

FOREWORD INFORMATION

1.2. ER-401 i ER-801 recorder's technical data

Model	ER-401	ER-801
Operation Mode	Quadruplex	
Operating System	Linux	
Video Input	4 x BNC	8 x BNC
Video Output	Main Monitor (1 x BNC, 1 x VGA), Spot Monitor (1 x BNC)	
Alarm Input	4	8
Alarm Output	1 relay output	
Audio Input / Audio Output	4 x RCA (Line-in) / 1 x RCA	
Recording Speed	Up to 100 fps (360x288), up to 25 fps (720 x 576)	Up to 200 fps (360x288), up to 50 fps (720 x 576)
Compression	H.264	
Recording Resolution	360 x 288, 720 x 576	
Recording Mode	Time-lapse, Event Alarm, Motion detection	
Display Speed	100 fps (real-time)	200 fps (real-time)
Display Screen	1, 4, sequence, zoom digital zoom of a selected screen area: 4x	1, 4, 6, 8, different, sequence, zoom digital zoom of a selected screen area: 4x
Motion Detection	22 x15 grid, with sensitivity defined individually for each channel	
Video Loss Detection	Yes	
Schedule Recording	Individually adjustable for each camera, combination of individual recording modes possibility	
Recorded Data Search	By date/time, events	
Event History Log	Yes	
Time Synchronization	Automatic time synchronization with NTP server	
HDD	Supports up to 1 HDD SATA	
Backup	HDD or USB Flash Memory through USB port, through the network	
External Ports	1 x Ethernet - RJ-45 interface, 10/100 Mbit/s, 2 x USB 2.0 - for Flash Memory, and for PC mouse, 1 x RS-485 - for PTZ cameras,	
PTZ Control	Directly from the device or via the network	
Protocol	N-Control, Pelco-D, Pelco-P and other	
Control	Front panel, IR remote control (in-set included), Network , USB PC mouse (in-set included)	
Menu	Multi-lingual On Screen Display (OSD)	
Software	CMS	
User Authorization	Creation of user accounts with varying privileges, password protection	
Power Supply / Power Consumption	12 VDC (100~240 VAC/12 VDC PSU in-set included)/ max. 30W without HDD	
Operating Temperature	0℃ ~ 50℃	
Relative Humidity	10% ~ 90% (non-condensing)	
Dimensions (mm)	255 (W) x 45 (H) x 210 (D)	
Weight	1 kg (without HDD)	

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2. STARTING THE DEVICE

2.1 HDD mounting

ER-401 and ER-801 DVR's feature the possibility of mounting 1 HDD SATA disk. List of supported models and disc capacities is available on the www.aat.pl website, product tab, in „Compatible HDD List" file.

Note: Prior to removing cover of the DVR please unplug the power cord first!
If the DVR is powered up, please shutdown the DVR's system using SHUTDOWN menu, prior to unplugging the power.

In order to mount HDDs, please unscrew the screws as depicted below, then please remove the DVR's cover first by sliding into the rear and then lifting it.

HDD MOUNTING

By default, SATA as well as power cables are connected to the mainboard, ready for connecting the HDD.

After removing top cover of the DVR, please mount the HDD using included screws (4 screws), next, connect power and signal cables.

After connecting device, please put the top cover onto the DVR and turn the device on in order to check the operation of particular components and to format the HDDs.

CAUTION!

If the device was brought from a location with lower temperature, please wait until it reaches the temperature of location it is currently in. Turning the device on immediately after bringing it from a location with lower ambient temperature is forbidden, as the condensing water vapour may cause short-circuits and damage the device as a result.

CAUTION!

Please get familiarized with description and functions of rear panel inputs/outputs.

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2.2. Getting the device ready to work

Unpack the device carefully.
After unpacking, please ensure that package contains the following items:

ER-401 or ER-801 recorder

Power supply
100~240 VAC/12 VDC

Power cord

IR remote control

Mouse

CD with a full version of user's
manual, software tools
and software

User's manual

If any of the elements has been damaged during transport, pack all the elements back into the original packaging and contact your supplier.

STARTING THE DEVICE

2.3 Electrical connection and other back panel elements of the ER-401 recorders.
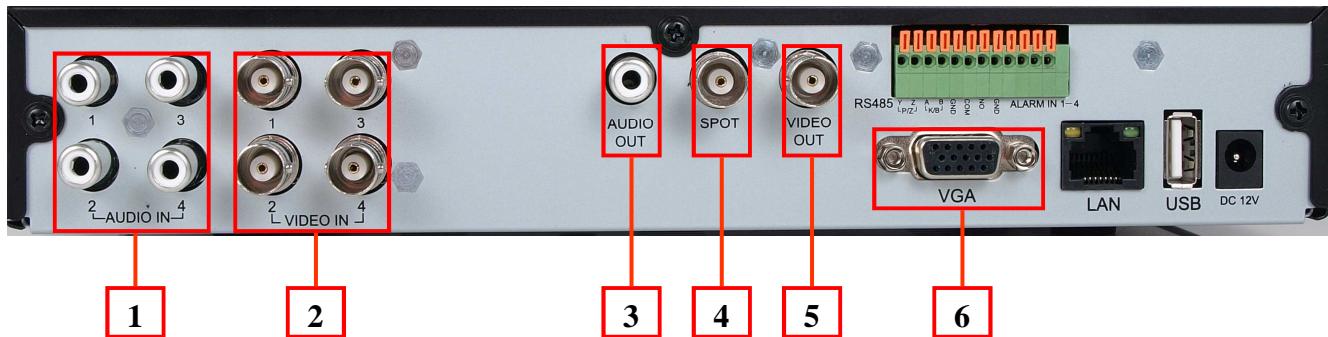
ER-401 rear view

1. **AUDIO IN:**   4 audio mono inputs (RCA type) for connecting microphones.
Note: sound recording may be conducted only when legal regulations of a given country allow for such activities.

2. **VIDEO IN:**   4 video inputs for connecting video signal sources to the DVR.
Note: When using twisted pair cable counting several hundred meters in length as a transmission medium and with low video signal strength, small crosstalk may appear .

3. **AUDIO OUT:**   Audio output for connecting speakers and amplifier. Connecting the speakers directly to the output is not advised. Usage of pre-amplifier is recommended.

4. **SPOT OUT**:   1 CVS output for SPOT monitors, allowing for full screen display of any camera, sequence of cameras.

5. **VIDEO OUT**:   Main monitor connectors, Composite Video Signal (CVS). Video out features the possibility of displaying the picture in many available modes.

6. **VGA:**   Main monitor connector, VGA type. Please use signal cable provided with the monitor when using aforementioned connection type. VGA out operates simultaneously with the CVS video out.

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ER-401 rear view

7.   RS-485 P/Z: RS-485 bus connector for remote control of speed dome cameras, Y(+), Z(-)

8.   ALARM OUT: relay alarm outputs, max. load capacity of the outputs is   0,5A/125VAC and 1A/30VDC.

9.   ALARM IN: 4 alarm inputs, which may be set either as normal open (N.O.) or normal closed (N.C.). In order to detect the alarm signal it should last 0.5sec at least.

10.   LAN: RJ-45 connector for connecting the DVR to the computer network in 10/100Mb/s standard.

11.   USB: USB port for USB mouse connection.

12.   DC12V, 3,33A: Power supply connector PSU in-set included.

STARTING THE DEVICE

2.4. Electrical connection and other back panel elements of the ER-801 recorders.
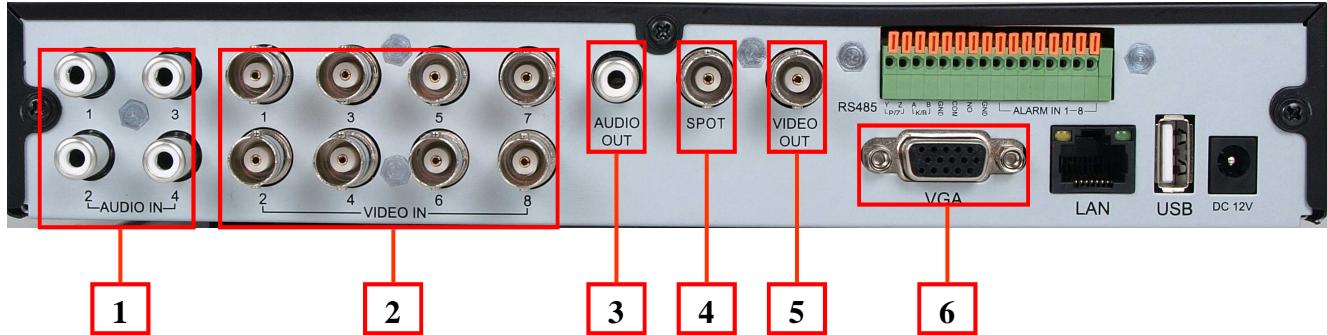
ER-801 rear view

1. **AUDIO IN:** 4 audio mono inputs (RCA type) for connecting microphones.
   Note: sound recording may be conducted only when legal regulations of a given country allow for such activities.

2. **VIDEO IN:** 8 video inputs for connecting video signal sources to the DVR.
   Note: When using twisted pair cable counting several hundred meters in length as a transmission medium and with low video signal strength, small crosstalk may appear .

3. **AUDIO OUT:** Audio output for connecting speakers and amplifier. Connecting the speakers directly to the output is not advised. Usage of pre-amplifier is recommended.

4. **SPOT OUT:** 1 CVS output for SPOT monitors, allowing for full screen display of any camera, sequence of cameras.

5. **VIDEO OUT:** Main monitor connectors, Composite Video Signal (CVS). Video out features the possibility of displaying the picture in many available modes.

6. **VGA:** Main monitor connector, VGA type. Please use signal cable provided with the monitor when using aforementioned connection type. VGA out operates simultaneously with the CVS video out.

STARTING THE DEVICE

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ER-801 rear view

7. **RS-485 P/Z**:   RS-485 bus connector for remote control of speed dome cameras, Y(+), Z(-)
8. **ALARM OUT:**   relay alarm outputs, max. load capacity of the outputs is   0,5A/125VAC and 1A/30VDC.
9. **ALARM IN:**   8 alarm inputs, which may be set either as normal open (N.O.) or normal closed (N.C.). In order to detect the alarm signal it should last 0.5sec at least.
10. **LAN:**   RJ-45 connector for connecting the DVR to the computer network in 10/100Mb/s standard.
11. **USB:**   USB port for USB mouse connection.
12. **DC12V, 3,33A**:   Power supply connector PSU in-set included.

STARTING THE DEVICE

2.5. Connecting of peripheral equipment to ER-401 and ER-801 recorders

System connection should be performed only by qualified personnel. Please familiarize yourself with the scheme located below, depicting possible implementation of the DVR in the system, before installation.
Depending on requirements, each system will have different number of peripherals connected.
Monitors, cameras etc. should be purchased separately, depending on current needs.

System overview
ER-401, ER-801

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2.6.   Front panel description
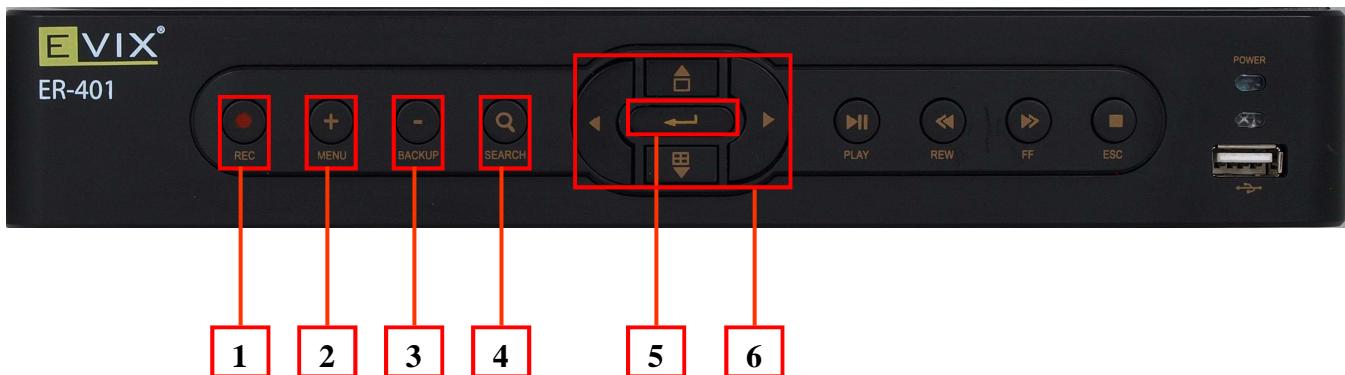
ER-401 and ER-801 view

1.	**REC**	pressing REC button starts recoding of all camera channels
2.	**MENU**	press MENU button to enter recorder's settings menu (after correct login). Menu functions are detailed in the following chapters of this manual.
3.	**BACKUP**	pressing the button allows you to enter the backup menu.
4.	**SEARCH**	pressing the button allows you to enter the search playback menu.
5.	**ENTER**	pressing the ENTER button in the setup mode confirms the changes made.
6.	**NAVIGATION BUTTONS**	navigation buttons serve a variety of purposes; - navigating through the recorder menus and changing the values of items - choosing 1/4/8 view or channels in "live" or playback mode - controlling the PTZ cameras

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STARTING THE DEVICE

ER-401 and ER-801 view

7.   PLAY / PAUSE   press the PLAY button during "live" mode to enter playback mode. In the playback mode press the button to pause the playback screen

8.   REW   in playback mode subsequent pressing switches the playback speed between RWx8, RWx16, RWx32, FFx1

9.   FF   in playback mode pressing the button again switches the playback speed between FFx1, FFx2, FFx4, FFx8, FFx16, FFx1/4, FFx1/2

10.   ESC / STOP   The button is used to exit the menu or going to a higher level of the particular submenus. In playback mode button is used for stop playback Hold the button for 3 seconds to switch between VGA and BNC menu output mode.

11.   USB   USB 2.0 port for external HDDs or Flash memory connection. The cable length connecting port to a device shouldn't exceed 30 cm.

12.   DIODY LED   LED for indicating power on

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2.7. **Turning on the power**

Connect power cord to the DVR to start the unit. Initialization lasts for approximately 30 seconds. During this time executing any device functions and pressing any buttons is prohibited. To shut down the device please use the menu.

NOTE: Menu OSD will be displayed on the VGA monitor default. To switch the monitors please hold the ESC button for 3 seconds.

2.8. **HDD installation**

ER-401 and ER-801 DVR's supports up to 1 HDD SATA

NOTE: **In order to find information regarding the compatible models of HDDs and maximum size of HDD, please contact Novus distributor or check the information presented at www.aat.pl. AAT HOLDING Company is not responsible for any problems resulting from using not recommended DVD recorders and hard drives.**

NOTE: **The list of compatible HDDs contains all the HDDs that can be used with a given DVR including HDDs designed for office use - so called desktop disks. However, due to the fact that reliability of the recording process and data safety are paramount factors of any CCTV system, we strongly advise to use HDDs designed for continuous (24/7) operation.**

NOTE: **You need to format disks to if they were used in a different device. All data saved on HDD prior to format will be lost .**

STARTUP WIZARD

3.   STARTUP WIZARD

Prior to using DVR for the first time, initial setup is strongly advised. This includes setting such parameters as time and date, language version, camera, audio, remote control, record mode, network and password.

A wizard is displayed after device start-up, in order to facilitate setup:
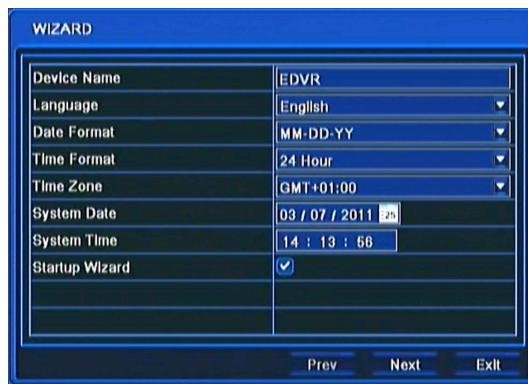
Navigate around the menu using arrow buttons or USB mouse.
To confirm your choice, to enter sub-menus and edit value fields use ENTER button or left mouse click.
To leave setup mode or to leave sub-menus and value editing use EXIT button or right mouse click.

Click the *Exit* button or press the *ESC* button on the front panel to escape from a start up menu wizard. Go to MAIN MENU / SETUP / BASIC / SYSTEM menu and tick off *Startup Wizard* to don't show the wizard menu next time when system is loaded.

Setting *Device Name* allows to remotely identify the device, *Language, Date time format, Time Zone* and *Date* and *Time* other settings. Click *Next* button to get the next setup window.

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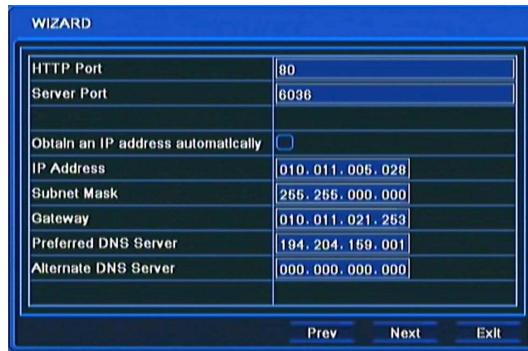
This window allows user to configure network settings such as; *HTTP Port, Server Port, IP Address, Subnet Mask, Gateway, Preferred* and *Alternate DDNS Server* otherwise select the Obtain an IP address automatically to get address from DHCP Server.

Click the *Next* button to display next setup window, depicted below:
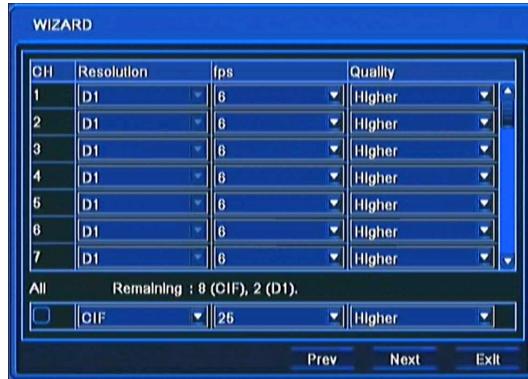
In this window you can setup recording *Resolution* globally for all channels (D1 / CIF resolutions available), recording speed (*FPS)* and *Quality* for each channel separately.
Remaining FPS visible below informs about available framerate.

After setup, click the *NEXT* button to get next setup window.

STARTUP WIZARD

For proper recorder operation, please format the installed HDD using this window.
Addition information like HDD Size, Free space etc. are also available here.
When HDD formatting is done, click the *Finish* button to end setup wizard and open the LOGIN window.

4.   LOGGING IN TO THE SYSTEM

To open main menu press the MENU button on the DVR's front panel, or click on the menu bar using mouse. Enter the default user name (**admin**) and default password (**123456)** into LOGIN window

Login window:

Press the *Cancel* button to exit the LOGIN window. Cameras are then displayed on the screen but no access to the DVR setup menu is given.
To disable LOGIN window display during next start-up, please go to the MAIN MENU / BASIC / SYSTEM   and tick off *Password Check*.

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5. DVR MENU

ER-401 / ER-801 DVRs feature multi-layer, on-screen displayed menu used for setting the device up.
OSD is multi-lingual and displayed using one of the following languages: English, Polish, Korean, Spanish, Slovak, Czech, Turkish, Dutch, Russian, Chinese, Chinese Simplified, Italian, French, Greek and other.
In order to access the DVR settings menu, please press the *MENU* button or select *MENU* from additional menu called by pressing the right mouse button..
Main menu comprises the following sub-menus: *SETUP, SEARCH, COPY, INFORMATION, DISK MANAGEMENT, UPGRADE, LOGOFF, SHUTDOWN.*

Main menu:
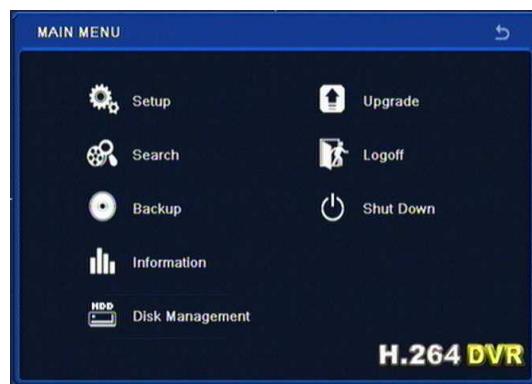
Certain DVR options require entering name or title. After selection of such option, a virtual keyboard appears on the screen. Character selection is performed via navigation buttons and confirmed by pressing the *ENTER* button.
SHIFT switches between capital and lower-case letters.

DVR MENU

5.1. Setup

Selecting *SETUP* from the main menu displays the following screen:
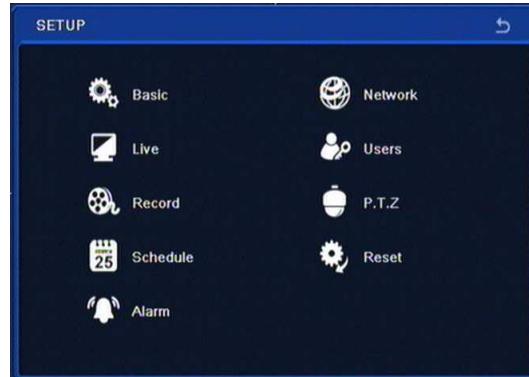
SETUP contains the following sub-menus: *BASIC, LIVE, RECORD, SCHEDULE, ALARM, NETWORK, USERS, P.T.Z. RESET*.

5.1.1. Basic

Selecting *BASIC* displays the following screen:
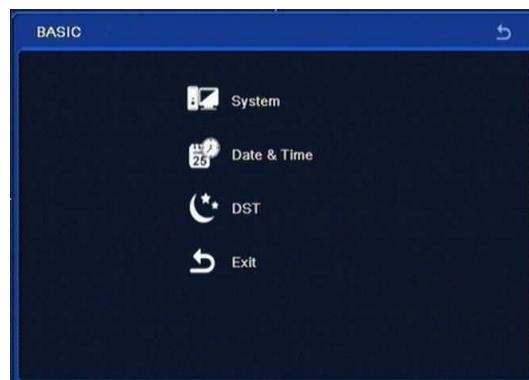
BASIC sub-menu contains SYSTEM, DATE & TIME, DST and EXIT options.

5.1.1.1. System

Selecting *SYSTEM* displays the following screen:
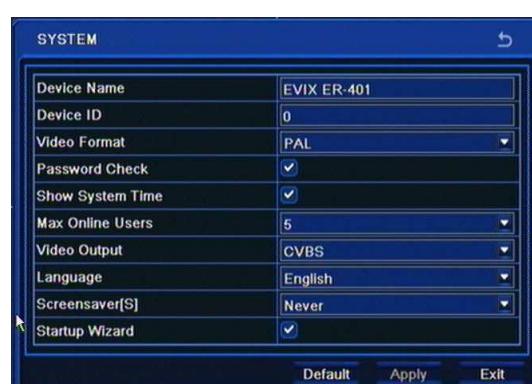
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Device name allows to assign a unique name to the DVR via virtual keyboard appearing after selection.

Device ID contains a number used to identify the DVR when controlling the device via IR remote or keyboard controller.

Video format allows to switch between *PAL* and *NTSC* video modes.

Checking the *Password check* box enables password authorization during menu access attempt.

Checking the *Show system time* displays current time and date in the top status bar.

Max online users determines maximum number of simultaneous open network connections (1 to 5) that may be established with the DVR.

Video output allows to switch between VGA and CVBS outputs that the video signal is being fed to. Selecting VGA resolution as 800x600, 1024x 768 or 1280x1024 is also possible here.

Note: Using NOVUS monitors is advised. AAT Holding doesn't take responsibility for possible issues that may arise during cooperation between DVRs and monitors of other manufacturers.

Language field allows to switch between different OSD menu language versions. Polish, English, German, Russian, Italian, French, Spanish as well as other languages are available.

Screensaver [S] allows to define time of inactivity (from 30 sec. to 5 min.) which, when exceeded, will close the menu and leave to main screen. Default value is *Never*.

Checking the *Startup Wizard* results in launching the wizard during device start-up.

Selecting *APPLY* applies the changes, while selecting *EXIT* leaves the menu without applying changes. To restore defaults, click the *DEFAULT* button.

DVR MENU

5.1.1.2. Date and time

Selecting *DATE/TIME* under *BASIC* sub-menu displays the following screen:

Window allows to set time and date using navigation and *ENTER* buttons. Please select the time zone that device operates in, select time and date format and apply settings.

Note: When changing time settings clock starts its operation only after selecting *SAVE NOW*. After changing date and time HDD format is advised.

5.1.1.3. DST

Selecting *DST* from the *BASIC* menu displays the following screen.
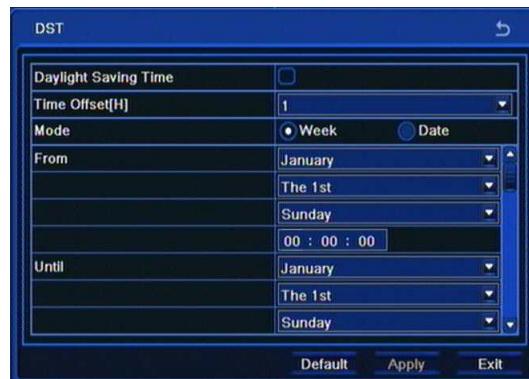
*DST* settings window allows to adjust proper local DST settings using navigation and *ENTER* buttons.
Last Sunday of march at 1:00 AM UTC clocks are moved 1 hour forward,
Last Sunday of October, at 1:00 UTC, 1 hour back.

DST (where applicable):
March 27th to 30th of October 2011;
March 25th to 28th of October 2012;
March 31st to 27th of October 2012;

Please select *APPLY* to apply settings or *EXIT* to leave without applying changes.

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5.1.2. Live view

Selecting *LIVE* from the *SETUP* displays the following screen:
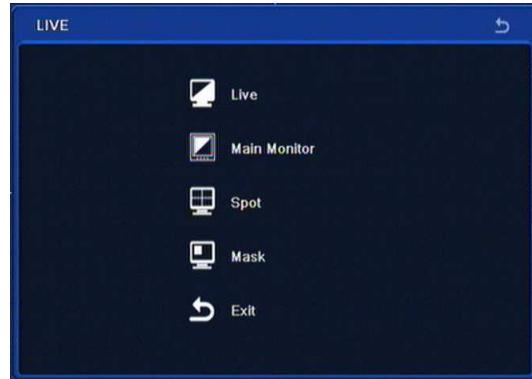
LIVE menu contains 5 sub-menus: *LIVE, MAIN MONITOR, SPOT, MASK, EXIT*.

5.1.2.1. Live

Selecting *LIVE* from the *LIVE* sub-menu displays the following screen:

Camera name allows to assign desired names to particular camera inputs.
Show name column allows to check camera boxes whose titles are later displayed on the screen.
Selecting *Setting* in the *Color* column allows to adjust brightness, contrast, saturation and hue for each of cameras or, via the ALL checkbox, for all cameras simultaneously.

Selecting *Recording status* displays an additional symbol on the screen, referring to the current status of the DVR channel. Blue rectangle indicates continuous recording, yellow indicates motion detection -triggered recording, green indicates manual recording, while red indicates alarm input-triggered recording.

Please select *APPLY* to apply settings or *EXIT* to leave without applying changes.

DVR MENU

5.1.2.2. Main monitor

Selecting *MAIN MONITOR* from the *LIVE* menu displays the following screen.
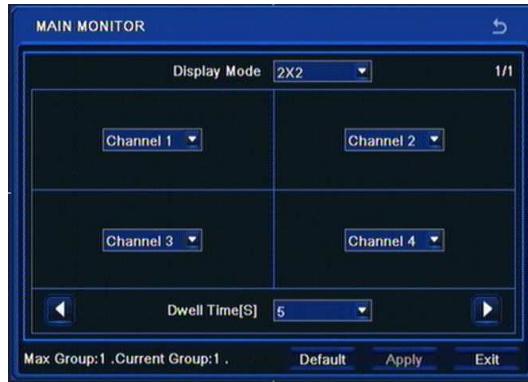
This tab allows to modify camera display modes during split-screen.
Any camera may be assigned to any position on the display, so there are no restrictions in assigning device channel 2 to video channel 1 for example.
In order to perform changes, please select any position from the *Channel* drop-down box, a and select camera number that should be displayed at the selected position.

Note: Cameras may appear only once on the selection screen.

Dwell Time [S] defines the time of automatic switching between the pictures (both in split-screen and full-screen modes).

5.1.2.3. Spot

Selecting *SPOT* from the *LIVE* menu displays the following screen:
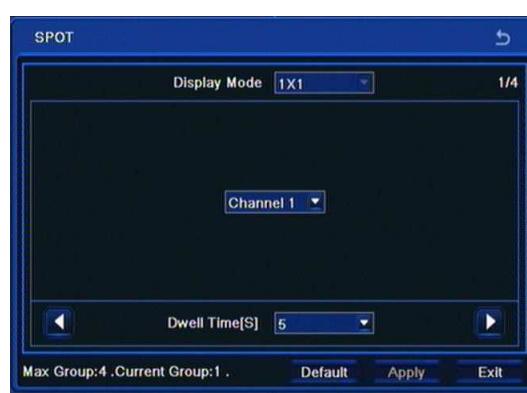
This menu allows to set the order and duration of displaying cameras on the SPOT auxiliary video output.
Channel drop-box sets the channel number to be displayed, while sequence number may be changed by clicking the right/left arrows. Number of current sequence and number of available sequences are displayed in the top right corner of the window.
*Dwell time* field determines the delay between switching to next sequence.

Note: Privacy zones set under MAIN MENU / SETUP / LIVE / MASK are not displayed on the SPOT monitor.

Please select *APPLY* to apply settings or *EXIT* to leave without applying changes.

5.1.2.4. Mask

Selecting *MASK* from the *LIVE* menu displays the following screen:
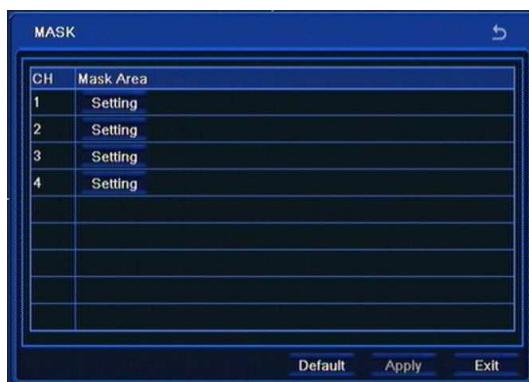
Clicking the *Setting* button displays live camera picture to which up to three privacy zones may be applied.
In order to remove a created zone (mask) please select it and press *APPLY*.

Please select *APPLY* to apply settings or *EXIT* to leave without applying changes. To restore settings please press the *DEFAULT* button.

5.1.3. Record

Selecting *RECORD* from the *SETUP* menu displays the following screen:

RECORD menu contains 7 items: *RECORD, RECORD BITRATE, TIME, STAMP, RECYCLE RECORDS, SNAP, EXIT*.

DVR MENU

5.1.3.1   Record

Selecting *RECORD* from the *RECORD* menu displays the following screen.

Second column, *Record*, allows to enable / disable the recording function for a given camera. *Audio* column allows to enable / disable audio recording for a given video channel. ER-401 / ER-801 DVRs may record up to 4 audio channels.

Note: Enabling recording in this menu, overrides alarm, motion and schedule recording.
Note: Please make sure that sound recording is in accordance with law regulations of your country.

Check the *All* box in order to record sound far all channels simultaneously.

Please select *APPLY* to apply settings or *EXIT* to leave without applying changes. To restore settings please press the *DEFAULT* button.

5.1.3.2   Record bit rate

Selecting *RECORD BITRATE* from the *RECORD* menu displays the following screen:

RESOLUTION column allows to select resolution that the video picture will be recorded with: CIF or D1 resolutions are available.

Note: Recording resolution is set for all cameras simultaneously.

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Fps column determines recording speed for each camera, values being given in frames per second. ER-401 DVR features 100fps for CIF resolution and 25fps for D1 resolution.

ER-801 DVR features 200fps for CIF resolution and 50fps for D1 resolution.

Checking *All* changes speed for all cameras simultaneously.

Note: Selected recording bit rate is applied to all video channels.

Note: Please remember that decreasing number of the recorded fps increases the overall recording time.

Note: In order to obtain smooth playback setting the same or similar fps values for all channels is advised.

Quality column allows to set the video compression level. *LOWEST, LOWER, LOW, MEDIUM, HIGHER* and *HIGHEST* levels are available.

Note: Total HDD recording time changes in accordance with quality settings.

Please select *APPLY* to apply settings or *EXIT* to leave without applying changes. To restore settings please press the *DEFAULT* button.

5.1.3.3   Time

Selecting *TIME* from the *RECORD* menu displays the following screen.

| TIME			
CH	Pre-alarm Record Tim	Post-alarm Record Tim	Expire[Days]
1	5	30	Never
2	5	30	Never
3	5	30	Never
4	5	30	Never
All			
	5	30	Never
		Default Apply Exit	

Pre-alarm Record Time is set to 5 seconds.

DVR MENU

Post-alarm recording time allows to set the recording time after triggering alarm input in a particular camera, ranging from 10 seconds to 5 minutes.

Expire column allows to set a number of days after which DVR deletes alarm recordings.

Selecting *All* changes options for all inputs simultaneously.

Please select *APPLY* to apply settings or *EXIT* to leave without applying changes. To restore settings please press the *DEFAULT* button.

5.1.3.4   Stamp

Selecting *STAMP* from the *RECORD*   menu displays the following screen.

Checking the *Camera name* box hard-codes camera name into the recorded video stream.

Checking the *Time stamp* includes time information into the video recording.

Selecting *Setting* in the *Position* column allows to move *Camera name* and *Time stamp* fields to a desired position on the scene.

Check the *All* box to change settings for all the channels simultaneously.

Please select *APPLY* to apply settings or *EXIT* to leave without applying changes. To restore settings please press the *DEFAULT* button.

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5.1.3.5   Recycle record

Selecting *RECYCLE RECORD* from the *RECORD* menu displays the following screen.

Enabling the *Recycle record* causes the DVR to overwrite the oldest recording with most recent ones in case when HDD capacity is reached. Disabling it stops recording in case of reaching the recording capacity.

Please select *APPLY* to apply settings or *EXIT* to leave without applying changes. To restore settings please press the *DEFAULT* button.

5.1.3.6   Snap

Selecting *SNAP* from the *RECORD* menu displays the following screen.
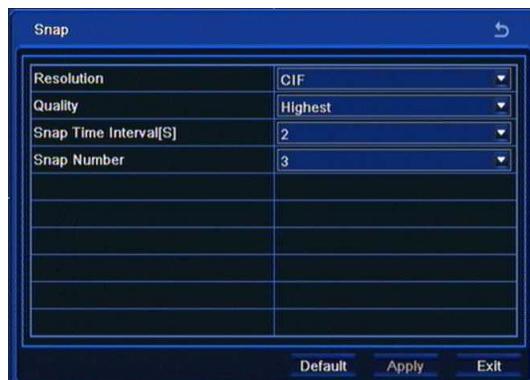
This menu allows to define picture parameters, that will be included into e-mails sent by the DVR in case of triggering the alarm event.

Resolution is as a factory default and cannot be modified.
Quality field allows to set the compression level for the snapshot:*LOWER*, *LOW, MEDIUM, HIGH,* and *HIGHEST*.

Snap time interval allows to set the time interval between subsequent pictures in a given sequence. Available intervals are 2 or 4 seconds.

DVR MENU

Snap number determines the number of pictures attached to e-mail message. Value can be changed from None to 3 pictures.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.4.   Schedule

Selecting *SCHEDULE* from the *SETUP* menu displays the following screen:

SCHEDULE contains 4 items: *SCHEDULE, MOTION, SENSOR, EXIT*.

5.1.4.1   Schedule

Selecting *SCHEDULE* from the *SCHEDULE* menu displays the following screen:
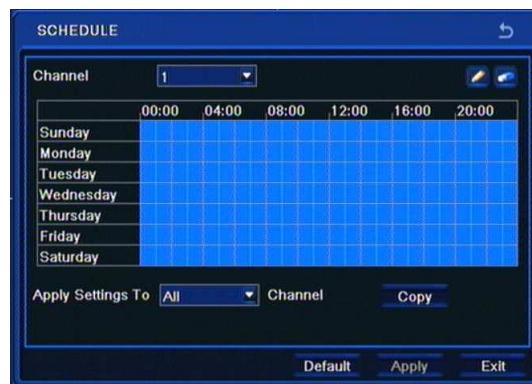
DVR conducts recording in accordance with defined schedules. Creating complex schedules which in turn allow to fit recording parameters to the environment system is operating in, as well as save HDD space. Schedule is presented in the form of table, with possibility of defining settings for each of the channels in particular days and hours.

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Draw a desired schedule using *Pencil* and *Rubber* icons for each of the cameras, or enter the recording time interval by double-clicking on the calendar.
COPY allows to copy the recording schedule from one camera to a desired channel or all channels simultaneously.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.4.2 Motion

Selecting *MOTION* from the *SCHEDULE* menu displays the following screen:
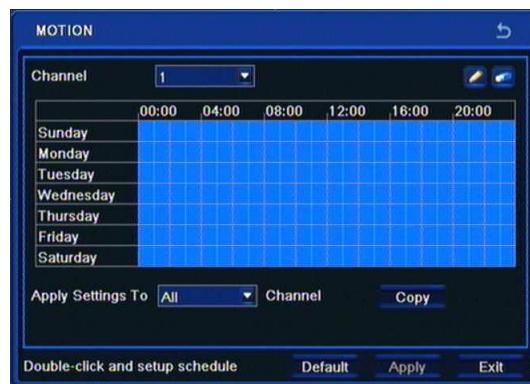
Draw a desired motion-triggered recording schedule using *Pencil* and *Rubber* icons.

COPY allows to copy the recording schedule from one camera to a desired channel or all channels simultaneously.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.4.3 Sensor

Selecting *SENSOR* from the *SCHEDULE* displays the following screen:
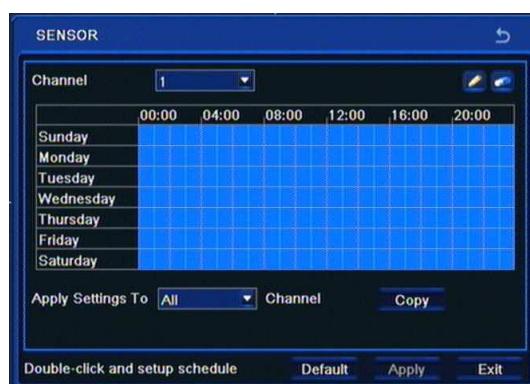
DVR MENU

Draw a desired alarm-triggered recording schedule using *Pencil* and *Rubber* icons.

COPY allows to copy the recording schedule from one camera to a desired channel or all channels simultaneously.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.5.   Alarm

Selecting *ALARM* from the *SETUP* menu displays the following screen:
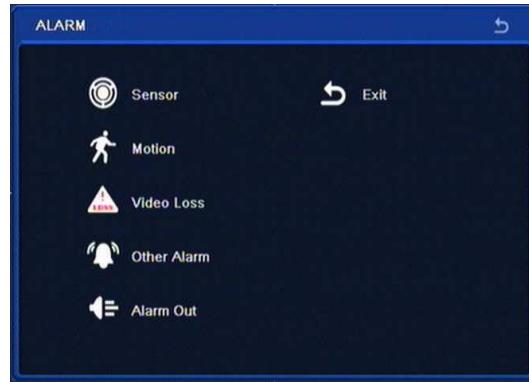
The *ALARM* menu contains six items: *SENSOR, MOTION, VIDEO LOSS, OTHER ALARM, ALARM OUT, EXIT*.

5.1.5.1   Sensor

Selecting *SENSOR* from the *ALARM* menu displays the following screen:
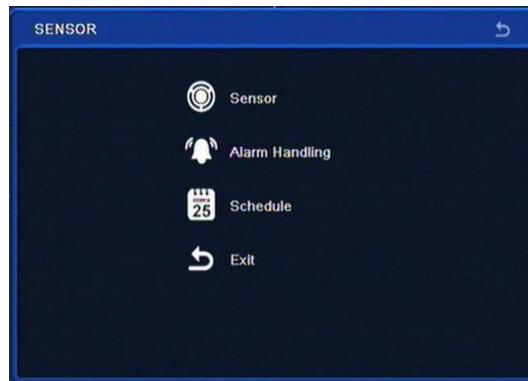
SENSOR menu contains four items: *SENSOR, ALARM HANDLING, SCHEDULE, EXIT*

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5.1.5.1.1. Sensor

Selecting *SENSOR* from the *SENSOR* menu displays the following screen:
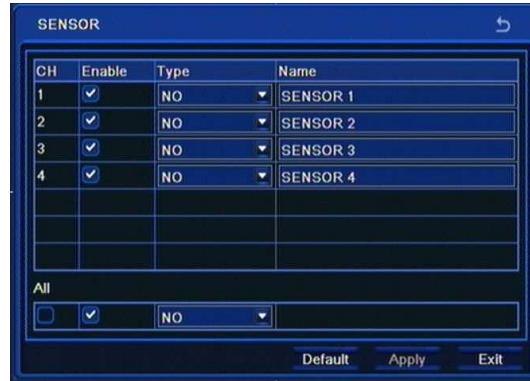
First column allows to either enable or disable particular alarm inputs of the DVR, while *Type* column is responsible for setting their mode of operation: *NO* - normal open, *NC* - normal closed, whereas *Name* allows to change names of the alarm inputs.

Please select *All* to change settings for all inputs simultaneously.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.5.1.2. Alarm handling

Selecting *ALARM HANDLING* from the *SENSOR* menu displays the following screen:
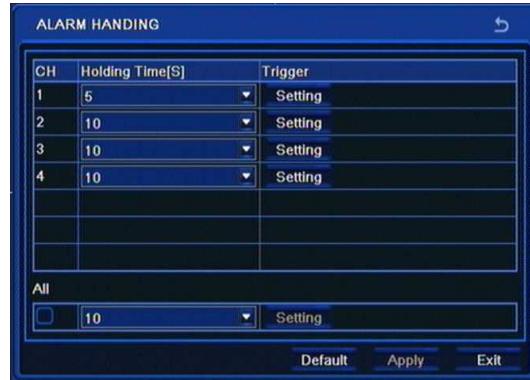
Holding time allows to adjust the alarm duration in case of triggering it via alarm input. Alarm duration may be adjusted in 5 seconds - 2 minutes range.

Please select *All* to change settings for all inputs simultaneously.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

DVR MENU

Selecting *Setting* from the *Trigger* column displays the following screen:

The tab mentioned above allows to adjust DVR's response to triggering of its alarm input.
Snap field allows to select cameras which alarm pictures are attached to e-mail messages.

To record tab allows to define channels which will be recorded in case of triggering an event.

To PTZ tab allows to set a reaction for the PTZ cameras in case of triggering any of the alarm inputs. For each PTZ camera, connected to the DVR and properly programmed, user can select a preset number (if programmed) that will be called if appropriate alarm input is triggered.

5.1.5.1.3. Schedule

Selecting *SCHEDULE* under the *SENSOR* menu displays the following screen:
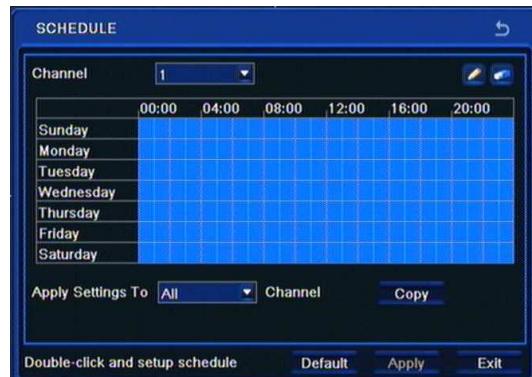
Draw a desired schedule using *Pencil* and *Rubber* icons for each of the alarm inputs.

COPY allows to copy the recording schedule from one camera to a desired channel or all channels simultaneously.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.5.2. Motion

Selecting *MOTION* from the *ALARM* menu displays the following screen:
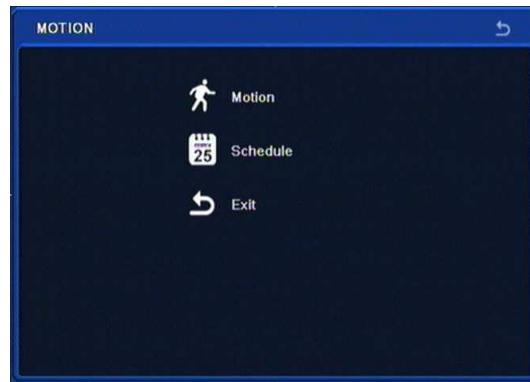
MOTION menu contains 3 items: *MOTION, SCHEDULE, EXIT*

5.1.5.2.1. Motion

Selecting *MOTION* from the *MOTION* menu displays the following screen:

Sub-menu allows to configure the built-in motion detection function.

Enable column allows to enable or disable motion detection function for particular cameras.
Holding Time [S] allows to set alarm duration if a motion detection event occurs in a particular camera, ranging from 5 seconds to 2 minutes (or continuous operation).

Trigger allows to set a DVR's response to a motion detection event.

Snap field allows to select cameras which motion alarm pictures will be later attached to e-mail messages.

*To record* tab allows to define channels which will be recorded in case of triggering an event.

To PTZ tab allows to set a reaction for the PTZ cameras in case of triggering motion detection event.
For each PTZ camera, connected to the DVR and properly programmed, user can select a preset number (if programmed) that will be called if appropriate alarm input is triggered.

DVR MENU

Area allows to set a motion detection zone as well as sensitivity of the camera in accordance with specification of the environment camera operates in.

Please select *All* to change settings for all inputs simultaneously.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.5.2.2. Schedule

Selecting *SCHEDULE* from the *MOTION* menu displays the following screen:
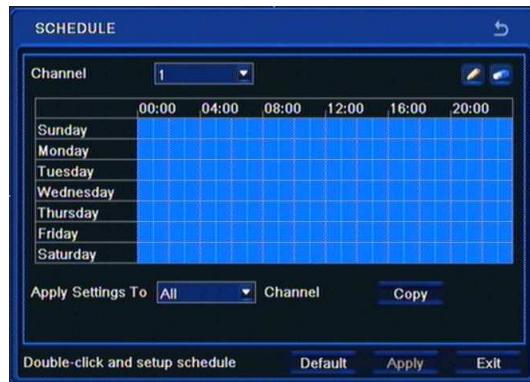
Draw a desired schedule using *Pencil* and *Rubber* icons for the particular channel.

COPY allows to copy the recording schedule from one camera to a desired channel or all channels simultaneously.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.5.3. Video loss

Selecting *VIDEO LOSS* from the *ALARM* menu displays the following screen:

Sub-menu allows to define response of the DVR to video loss event on one of its video channels.

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Selecting *Trigger* displays the following screen:

Snap field allows to select cameras which pictures from are later attached to e-mail messages.

To record tab allows to define channels which will be recorded in case of triggering an event.

To PTZ tab allows to set a reaction for the PTZ cameras in case of video loss event.
For each PTZ camera, connected to the DVR and properly programmed, user can select a preset number (if programmed) that will be called if video loss is triggered.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.5.4.   Other alarm

Selecting *OTHER ALARM* under the *ALARM* menu opens the following screen:
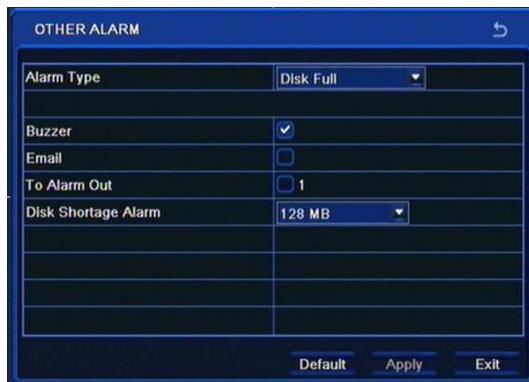
This menu allows to set response of the DVR in various other cases: reaching HDD capacity (with record recycling inactive), IP address conflict, LAN network disconnection and an HDD error.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

DVR MENU

5.1.5.5. Alarm out

Selecting *ALARM OUT* from the *ALARM* menu displays the following screen:

MOTION menu contains four items: *ALARM OUT*, *SCHEDULE, BUZZER, EXIT*

5.1.5.5.1. Alarm out

Selecting *ALARM OUT* from the *ALARM OUT* displays the following screen:
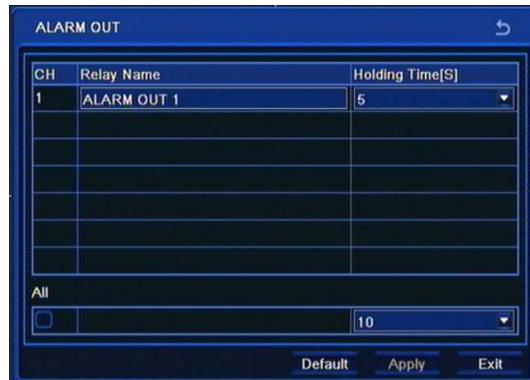
Relay name allows to assign a name to alarm output using virtual keyboard.

Holding time allows to set alarm output activation time, ranging from 5 seconds to 2 minutes (or continuous).

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.5.5.2. Schedule

Selecting *SCHEDULE* from the *ALARM OUT* displays the following screen:
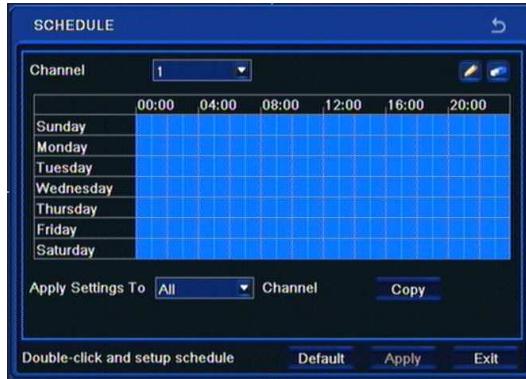
Draw a desired schedule using *Pencil* and *Rubber* icons for the alarm output.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.5.5.3. Buzzer

Selecting *BUZZER* under the *ALARM OUT* sub-menu displays the following screen:

This menu allows to enable/disable internal DVR buzzer, while *Buzzer Hold Time [S]* allows to set the alarm buzzer duration, ranging from 5 seconds to 2 minutes (or continuous).

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

DVR MENU

5.1.6. Network

Selecting *NETWORK* from the *SETUP* displays the following screen;
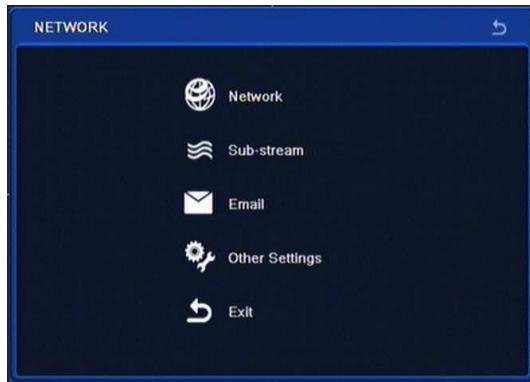
NETWORK sub-menu contains five items: *NETWORK, SUB-STREAM, E-MAIL, OTHER SETTINGS, EXIT*

5.1.6.1. Network

Selecting *NETWORK* from the *NETWORK* menu displays the following screen:
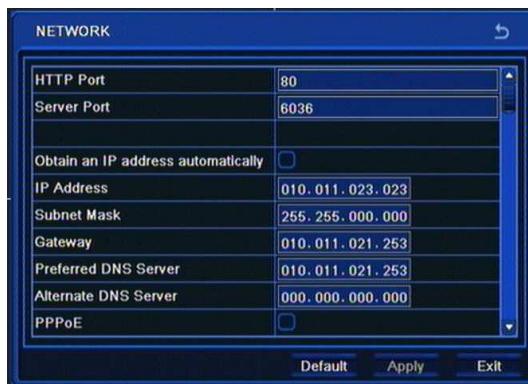
This menu is responsible for network settings. Prior to configuring this sub-menu please consult your network administrator to obtain proper and allowed network parameters that may be entered here.

In order to check connectivity please click the *Test* button.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.6.2.   Sub-stream

Selecting *SUB-STREAM* from the *NETWORK* menu displays the following screen;

This menu is responsible for parameters of the default network stream (sub-stream), its *quality* and *fps* (global settings). *Resolution* is permanently set.
User may also connect to the master stream of the DVR, which parameters match the recording settings.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.6.3   Email

Selecting *EMAIL* from the *NETWORK* sub-menu displays the following screen:
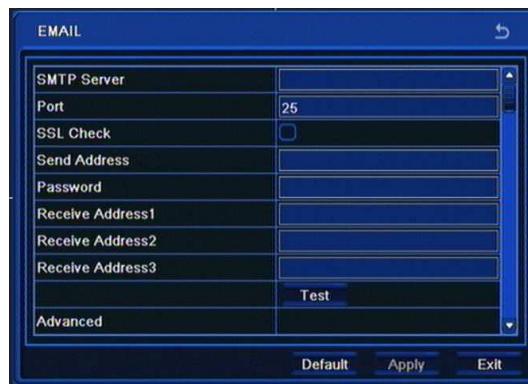
Menu above allows to enter up to 3 e-mail addresses that the event information (such as motion detection, video loss or reaching HDD capacity) are later sent to.
SMTP Server requires entering IP address of the outgoing e-mail server (or its domain name using virtual keyboard).
Port defines the default communication port for the device (port 25 is the default for outgoing mail).

DVR MENU

SSL checkbox needs to be checked if the message is encrypted using SSL protocol.

Sender address requires entering an e-mail address, that messages are sent from.

Password requires entering the password used to login to the mail server.

Receive address (1-3) requires entering address(es) that e-mail alarm messages are sent to.

In order to test connectivity please click the *Test* button.

Check the *Attaching image* if you wish an alarm picture attached to e-mail.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.6.4   Other settings

Selecting *OTHER SETTINGS* from the *NETWORK* sub-menu displays the following screen:
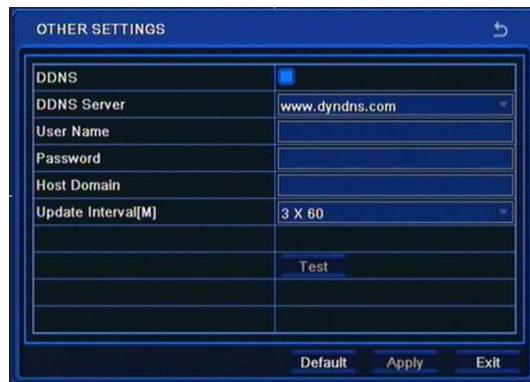
DDNS address update is used to assign a domain to a dynamic IP address.

Note: Although the DVR supports dynamic IP addresses, it is advised that DDNS support should be performed at the local router that DVR is connected to.

Note: Prior configuration attempt please register the address in one of the DDNS servers supported by the DVR - www.dyndns.org server is advised.

Note: Prior to configuring the DDNS please contact the network administrator in order to obtain proper network parameters that are entered in this menu.

DDNS Server Allows to select a DDNS server that will be used in the DVR (dyndns.org is recommended).

User name requires entering the user's name registered in the DDNS database.

Password requires entering the DDNS-registered password.

Host domain requires entering hostname, that was registered in selected DDNS server.

Update Interval [S] requires selecting time interval between subsequent address updates.

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Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.7.   Users

Selecting *USERS*   from the *SETUP* menu displays the following screen:
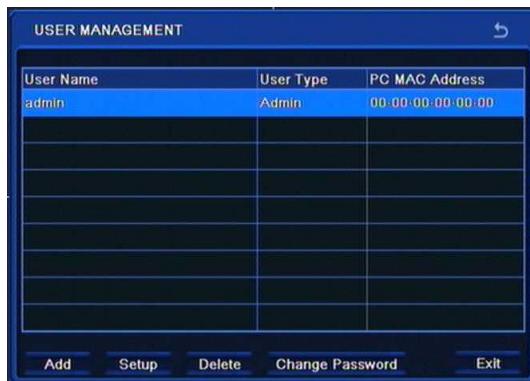
This menu is responsible for user management - adding and removing user accounts, assigning their passwords and privileges.
User *Admin* is a default user account of the DVR and cannot be deleted.
In order to add user please select the *Add*. The following window appears:
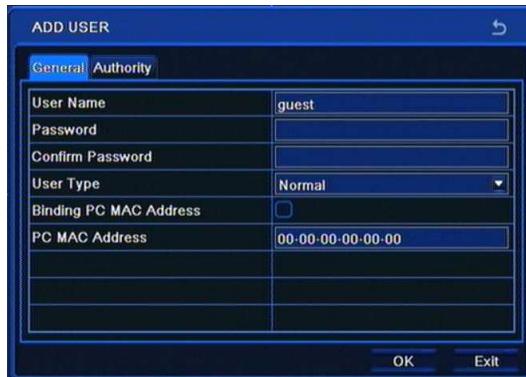
User Name requires entering user's name via virtual keyboard.

Password requires entering user's password via virtual keyboard.

Confirm Password requires confirmation of the data entered in the *Password* field.

User Type sets user account type: either *Normal* or *Advanced.*

PC MAC Address is responsible for entering MAC address of the PC that user utilizes for connection to the DVR. In order to verify MAC address please check the *Binding PC MAC Address* box.

After entering passwords please select the *OK*. When *Password* and *Confirm Password* differ, an appropriate message will be displayed and password entering needs to be re-entered.

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Selecting *AUTHORITY* displays the following screen.
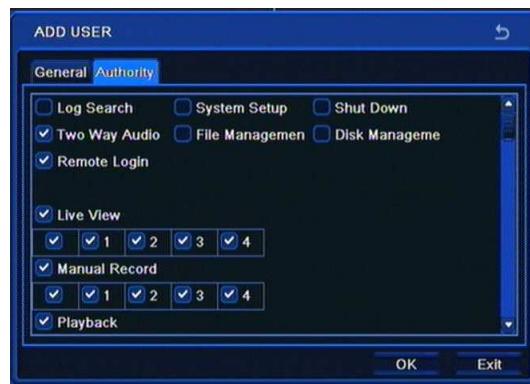
User may be granted with listed privileges: *Log Search, Two Way Audio, Remote Login, System Setup, File Management, Shut Down, Disk Management, Live view, Manual Record, Playback.* and others.

Select *OK* to apply changes or *EXIT* to leave the menu discarding changes.

Note: In order to change user's password one needs to successfully login to his account first.

5.1.8. P.T.Z.

Selecting *P.T.Z* from the *SETUP* menu displays the following screen:
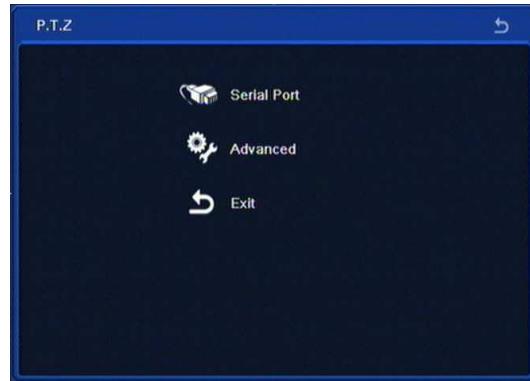
P.T.Z. menu contains three items: *SERIAL PORT, ADVANCED, EXIT*.

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5.1.8.1. Serial port

Selecting *SERIAL PORT* from the *P.T.Z.* menu displays the following screen:
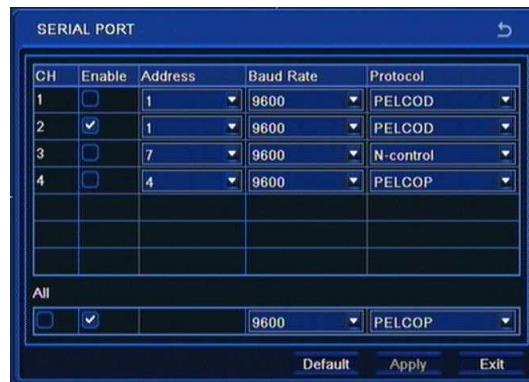
In order to ensure proper cooperation of the DVR and PTZ cameras settings of the devices should be in accordance with respective settings in cameras. When system doesn't feature PTZ cameras (or other RS-485 equipped) changes in this tab are unnecessary.

This window also allows to select communication port and ID of the PTZ camera in question, as well as setting the baud rate for the RS bus.

Enable column allows to enable / disable PTZ control for a desired camera.

Address column allows to set the ID of the camera (in accordance with ID settings in the camera). Setting the camera ID in accordance with number of the DVR video input camera is connected to is advised. Setting same IDs for more than one camera is not advised.

Baud rate allows to set the RS communication speed.

Protocol allows to select telemetry protocol from one of the available: *N-Control, Pelco-P and Pelco-D*, in accordance with one set in the camera.

Checking *All* changes settings for all cameras simultaneously.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

DVR MENU

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5.1.8.2.   Advanced

Selecting *ADVANCED* from the *P.T.Z.* menu displays the following screen:

This menu allows to program presets in a PTZ camera.

Note: When using N-Control, *Tours* and *Patterns* are not supported.

Please select *APPLY* to apply changes or *EXIT* to leave menu without applying changes.

5.1.9.   Reset

Selecting *RESET* from the *SETUP* menu displays the following prompt:


RESET reverts all device settings to its factory defaults. please keep in mind that resetting the device erases all passwords, schedules etc.

Note: Clicking OK restarts the device and restores default settings, with the default monitor being VGA-connected one. To switch outputs please press and hold the *ESC* button (on the DVR front panel) for three seconds.

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5.2. Search

Selecting *SEARCH* in the *MAIN MENU* displays the following screen:
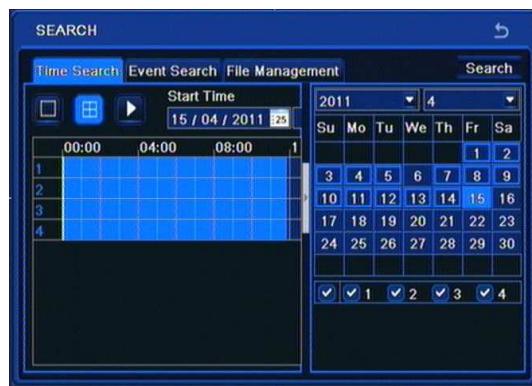
Days of the month marked with a blue frame indicate that recordings exist for them. Selecting a day and confirming it with the *SEARCH* button updates time on the hour bar. Hours containing recordings are marked light blue. Precise selection is performed by moving the white marker across the hour bar, using mouse - or entering desired hour, minute and second in the text field above the hour bar. Year and month is selected using fields located above the calendar.

If no recordings exist for the selected timeframe, an appropriate message will be then displayed.

Selecting *EVENT SEARCH* displays the following screen:

Recordings associated with events exist for days of the month marked by a blue frame.

Selecting a day and confirming it with the *SEARCH* button updates the event list. Registry search is performed in one-day intervals, double-clicking on any alarm displays first image associated with that event.

Registry search is performed using buttons located in the bottom right part of the screen. Additionally, user may define filters the registry is searched in accordance with: *MOTION, ALARM INPUTS* or *ALL.*

DVR MENU

Selecting *FILE MANAGEMENT* displays the following screen:

Days of the month marked with a blue frame indicate that recordings exist for them. Selecting a day and confirming it with the *SEARCH* button updates the file list Registry search is performed in one-day intervals, double-clicking on any event starts playback. Recording files can be removed from the DVR or protected from deletion. File being currently saved cannot be removed.

5.3. Backup

Selecting *COPY* from the *MAIN MENU* displays the following screen:

Stored recordings may be copied to external memory devices, such as pendrives. DVRs allow to copy recordings in two supported formats: *.dat– custom file and *.avi. *. avi files playback requires earlier installation of the codec provided by the DVR.

Timeframe of the record should be set using calendar, so should be its starting and ending point, and channels to be included. Clicking *SEARCH* displays file list, in accordance with specified search parameters, while double-click starts the playback.

Bottom left part of the screen contains information on the number of pages containing files found. To move to the next page or return to previous, please press the right/left arrows.

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Selecting *BACKUP* displays the following screen:

Backup player requires selecting whether recorded file should be extended with embedded file player or not.
Save file type determines file format of the copied material - custom or AVI.
Clicking the *START* button prompts the DVR to start copying material to pendrive.

5.4. Information

Selecting *INFORMATION* from the *MAIN MENU* displays the following screen.
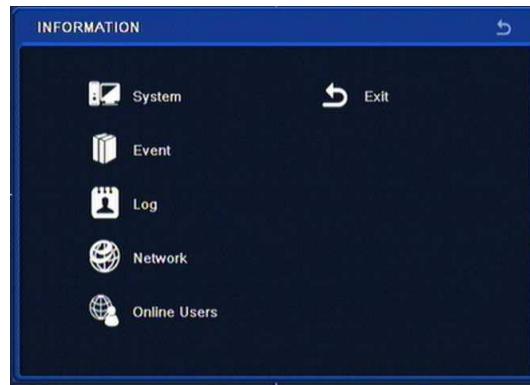
INFORMATION menu contains six items: *SYSTEM, EVENT, LOG, NETWORK, ONLINE USERS, EXIT*.

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5.4.1. System

Selecting *SYSTEM* from the *INFORMATION* menu displays the following screen:

User may find information on *Device Name, Device ID, Hardware Version, Kernel Version, Firmware Version,* and *Launch Date*.

5.4.2. Event

Selecting *EVENT* from the *INFORMATION* menu displays the following screen:

This window contains *Motion*, *Sensor* and *Video Loss* messages stored by the DVR.
Date and time field should contain the range of search.
Channel number checkboxes are responsible for selecting cameras that event logs refer to.
Bottom bar contains event types that the logs are associated with.
Clicking the *SEARCH* displays an event list, bottom left corner contains information on the number of pages containing events, to move to the next page or return to previous, please press the right/left arrows.

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5.4.3.   Log

Selecting *LOG* from the *INFORMATION* menu displays the following screen;

This window contains system logs, indicating events such as: *Operation, Setup, Playback, Backup, Search, Check Information, Search, Check information* and *Error*.
Date and time field should contain the range of search.
Please select desired event types in the field at the bottom of the window, that are the object of search. Clicking the *SEARCH* displays event list, bottom left corner contains information on the number of pages containing events, to move to the next page or return to previous, please press the right/left arrows.

5.4.4.   Network

Selecting *NETWORK* from the *INFORMATION* menu displays the following screen:
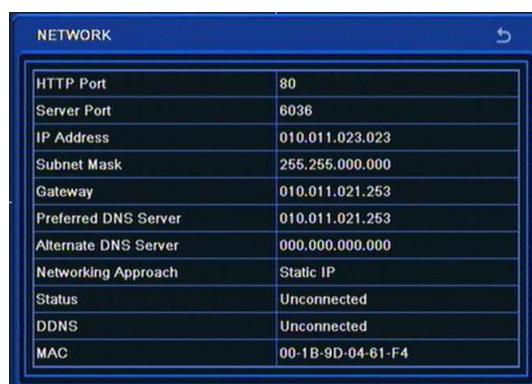
This window contains information on current network settings; *HTTP Port, Server Port, IP Address, Subnet Mask, Gateway, Preferred DNS, Alternate DNS*, *Networking approach*, *Status, DDNS* and *MAC Address.*

DVR MENU

5.4.5.   On-line user list

Selecting *ONLINE USERS* from the *INFORMATION* menu displays the following screen:
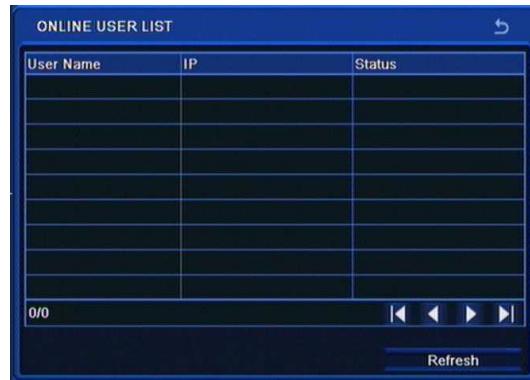
This window contains the list of users currently connected to the DVR via network.

5.5. Disk management

Selecting the *DISK MANAGEMENT* in the *MAIN MENU* displays the following screen:
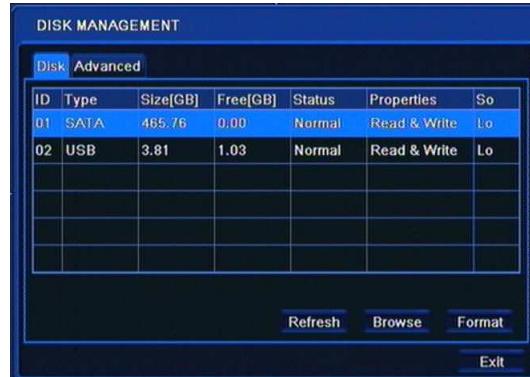
This window displays basic information about HDD, *Size* of the disk and *Free* (both expressed in [GB]) space being one of them.

In order to format HDD, please click the *FORMAT* button.

 Note: All stored data are erased during HDD format.

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Selecting the *ADVANCED* tab displays the following screen:
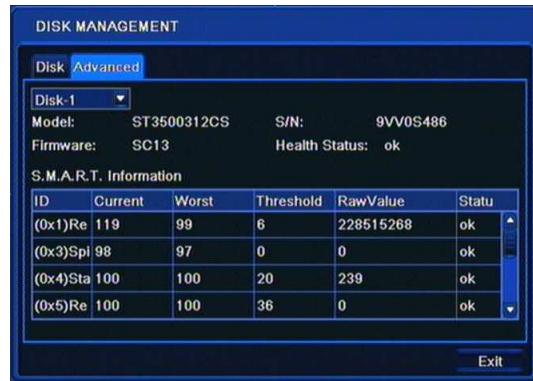
This window displays advanced HDD information.

5.6. Upgrade

Selecting *UPGRADE* from the *MAIN MENU* displays the following screen:

In order to upgrade please connect an external USB memory to the DVR, containing appropriate firmware *.tar file.

Note: Software file must be appropriate for the upgraded DVR!

After selecting appropriate file, please click the *UPGRADE*.

After finishing update, system restarts and its settings are reverted to factory defaults. VGA output becomes primary for the DVR, to switch OSD display to BNC output please press and hold *ESC* for three seconds.

Note: Disconnecting power from the system during upgrade is forbidden. Interruption of process may damage DVR's main board. AAT Holding sp. z o.o. doesn't bear responsibility for device damage resulting from system upgrade process.

DVR MENU

5.7. Logoff

Selecting *LOGOFF* from the *MAIN MENU* displays the following screen:
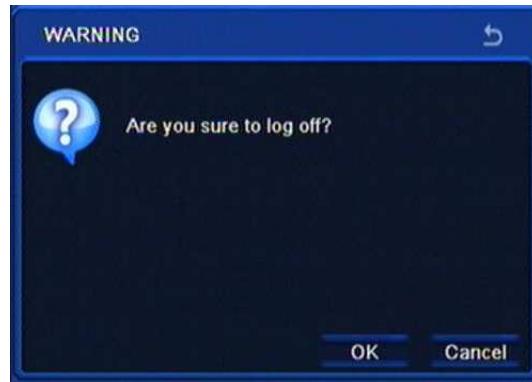
To log out a currently logged-in user please select the *LOGOFF*, and confirm with *OK*. After logoff, video is still displayed on the screen, however to open the OSD menu again, subsequent login is required.

5.8. Shut down

Selecting the *SHUTDOWN* from the *MAIN MENU* displays the following screen:
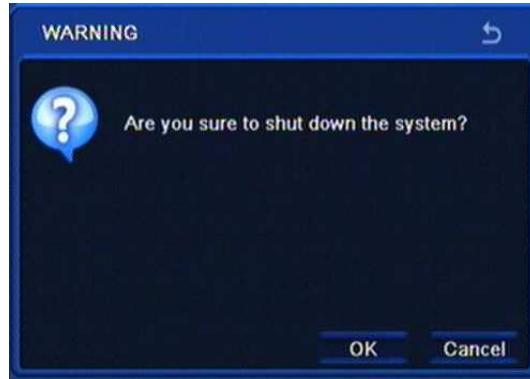
In order to shutdown the system (turn the DVR off) please select *SHUTDOWN* and confirm with *OK*.

Note: Any other method of turning the system off other that the one described above is not allowed and may result in loss of data or damage to the device.

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6.   OPERATING THE DVR

DVR control may be performed via front panel buttons (described in chapter 2.6 of this manual), USB mouse connected to the DVR and remotely, using a remote IR controller. Additionally, DVR features OSD menu that allows to call all functions (during live view) assigned to front panel buttons using only mouse.

In order to bring up the OSD menu, please click the right mouse button anywhere on screen, or press the *MENU, ESC* and *ENTER front panel* buttons consecutively. The menu, depicted below, is then displayed:
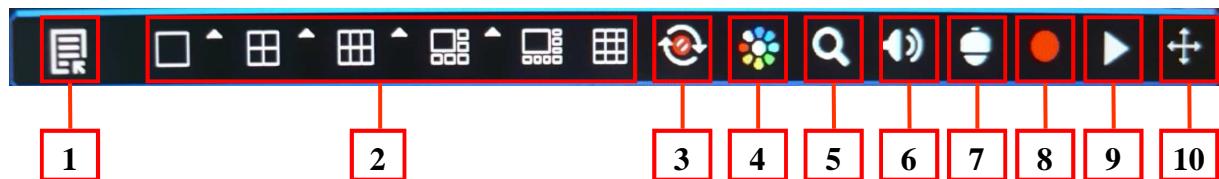
1. Enters MAIN MENU of the DVR.

2. Changes display mode.

3. Displays cameras in sequence.

4. Adjusts brightness, color, hue and contrast of the camera.

5. x4 digital zoom.

6. Selects audio channel for its association with video output and adjusts volume.

7. Switches to the PTZ camera control mode.

8. Counterpart of the *REC* front panel button.

9. Counterpart of the *PLAY* front panel button.

10. allows to move menu to any part of the screen.

Left mouse button confirms selection, enters sub-menus and text fields, so does the *OK.* button.

MENU or right mouse button leaves the menu or moves to a higher level menu.

OPERATING THE DVR

6.1. Live camera view

After successful initialization, live camera pictures are displayed on the monitor. Default display mode is 4 or 8 cameras in split-screen mode.
Display mode is changed either by using navigation buttons on the front panel or via auxiliary menu brought up by mouse.
Split-screen images may be freely adjusted. Each camera may be displayed only once in the split-screen mode.
Camera positions on the screen may be adjusted freely, via OSD menu or by dragging & dropping using the mouse.

Sequence display is enabled by pressing the 🔄 button available from the auxiliary menu. Selecting split-screen or a full screen, as well as subsequent pressing of the 🔄 b u t t o n ends sequence display.
Sequence switch intervals are set in the DVR menu.

Note: Default display settings are 4 or 8 split-screen display (depending on the model). To switch the cameras in full-screen on the main monitor, please change the settings in *MAIN MENU / SETUP / LIVE / MAIN MONITOR.*

On the spot monitor, cameras are displayed in sequence, with display settings set in the DVR menu.

6.2. Zoom function

Any particular part of the video picture can be magnified using appropriate auxiliary menu button. After enabling the function, a magnified part of the picture appears on the screen. Zoom area may be moved using mouse. Clicking right mouse button or pressing the ESC on the front panel exits the zoom mode.

6.3. PTZ camera control

Prior to controlling cameras please make sure that the RS-485 between the DVR and camera(s) is properly configured. Further description is presented in chapter 8, page 72. After selecting a properly configured PTZ it can be then controlled either form the front DVR panel or via mouse.
Control mode is launched by clicking appropriate button in the auxiliary menu. PTZ control window is then displayed, as depicted below:
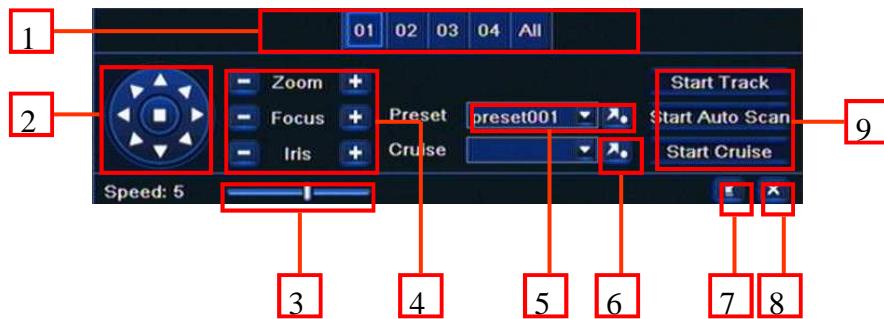
1. Selects PTZ camera number for control.

2. Controls camera movement in vertical and horizontal planes.

3. Changes camera pan/tilt speed.

4. Controls focus, iris and zoom.

5. Calls presets.

6. Brings up the PTZ camera OSD menu (N-Control protocol).

7. Hides the PTZ control menu.

8. Leaves PTZ control menu.

9. Calls first Pattern, Auto scan, first Tour.

Note: When using N-Control in PTZ control, OSD menu is brought up by pressing the button numbered 6 on the picture.

Note: PTZ control using the front panel buttons is possible after hiding the PTZ menu with appropriate button.

Note: To stop Patterns, Auto scans or Tours please press any direction button (arrow).

OPERATING THE DVR

6.4. Playback

Users granted with appropriate privileges may watch stored recordings after logging in to the DVR. In order to start quick playback please press the *PLAY* button on the front panel or select an appropriate button from the auxiliary menu. DVR starts playback starting 5 minutes before button pressing and displays the menu as depicted below:
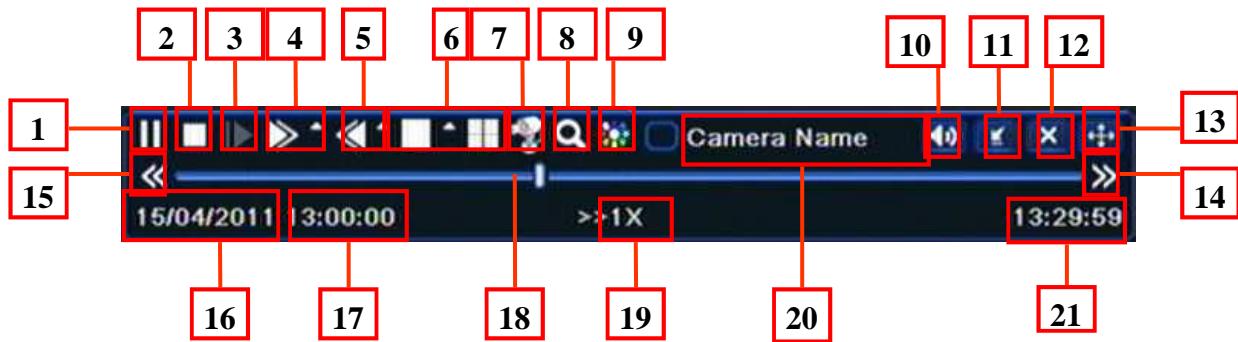
1. Pause.

2. Stop.

3. Playback.

4. 1/4x, 1/2x, 1x, 2x, 4x, 8x, 16x fast forward.

5. 8x, 16x, 32x reverse and 1x forward.

6. Changes the display mode.

7. Selects cameras to be displayed.

8. x4 digital zoom.

9. Brightness, color, hue and contrast camera adjustment.

10. Enables/disables audio.

11. Hides playback menu window.

12. Exits the playback menu.

13. Button allowing for changing menu placement.

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14. Plays the next recording file

15. Plays previous recording file

16. Date of current playback

17. Beginning of the recording file

18. Playback bar

19. Current playback speed

20. Shows/hides camera names

21. End of the recording file

6.5. Searching the material

Precise selection of material for later playback is also possible. To search for recordings, please click the *SEARCH* button on the DVR front panel or select appropriate position from the auxiliary menu 🔍. Next, a search menu is displayed on the screen, as described in chapter 5.2 / page 50.

6.6. Backup

In order to backup the recordings, install the Flash USB memory inside the DVR and press the *BACKUP* button. A backup menu is then displayed on the screen, as described in 5.3 /p. 51

6.7. Live audio

DVRs feature 4 audio inputs and one audio output. „Live" view allows to associate any of the audio inputs and listen to "live" audio transmission. Audio channel selection is possible after selecting the button from auxiliary menu 🔊 .
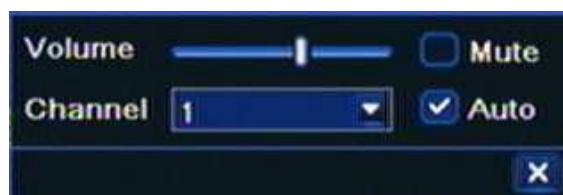
6.8. Bi-directional audio

DVR features bi-directional sound transmission between the device and remote IE user. To start conversation, please select the 🎤 button in the IE browser, audio stream is then fed to the audio output of the DVR.

Speaker output doesn't feature a pre-amplifier therefore usage of speakers with built-in pre-amplifiers is advised.

OPERATING THE DVR

6.9. Controlling DVR via IR remote

An IR remote controller is shipped together with the DVR. Range is dependent on the battery level and varies from a few to a few tens of meters.

If ID number of the remote equals 0 controlling any of the ER-401 / ER-801 DVRs becomes possible. If two or more DVRs utilize same ID they will be controlled simultaneously.

To change ID of the DVR please enter the *MAIN MENU / SETUP / BASIC / SYSTEM* and enter *Device ID* ranging from 0 to 65535.

Current ID number may be checked under *MAIN MENU / INFORMATION / SYSTEM*. To change current ID number of the remote please point the remote in general direction of the DVR, next press the 8 button twice, select the ID ranging 0 to 65535 and press ENTER on the remote.

Overview of the IR remote ID change.
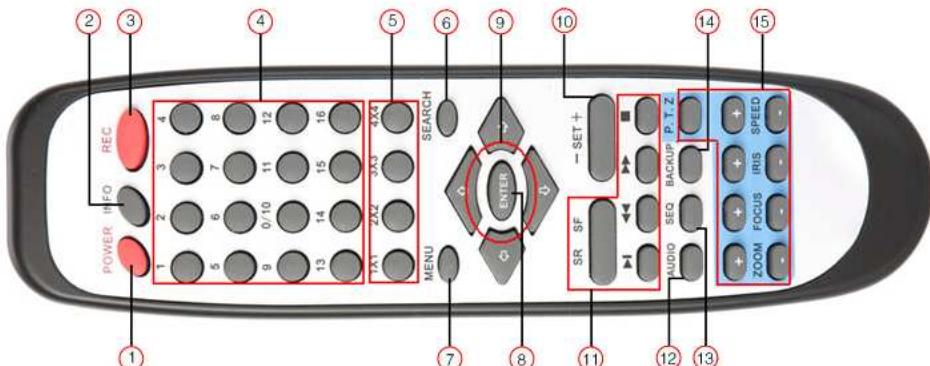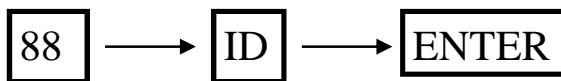
IR remote overview

1. Turns the DVR off.
2. Displays information menu.
3. Manual recording.
4. Selects camera or enters numbers.
5. Changes display mode.
6. Searches for the recordings.
7. DVR menu.
8. Confirms selection.
9. Navigates around the DVR menu or controls PTZ camera movements.
11. Playback.
12. Audio menu.
13. Starts sequence display.
14. Starts backup menu.
15. PTZ camera control.

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7. OPERATING THE DVR USING INTERNET EXPLORER.

ER-401, ER-801 DVRs allow to operate in the network environment using TCP/IP protocols together with Internet Explorer 7.0 (or newer) browser.

Note: Connection using any browser other than Internet Explorer is not possible.

Establishing up to 5 simultaneous connections with the DVR in "live" mode, up to 1 in playback mode or 1 connection with the main stream in live view / setup is possible.

7.1. Hardware requirements

CPU	Intel® Pentium 2,4GHz or better
RAM	2GB or more
Operating system	Microsoft® Windows XP™ SP3 / Windows 7
DirectX	9.0C or newer
Other	Graphics card: AGP x 4 512MB (1024x768 24bit) or better 10/100BaseT NIC, sound card

7.2. Establishing a connection

Network connections require the Internet Explorer browser.

Browser bar requires entering the IP address of the DVR. Moreover, if a set HTTP port differs from the default setting, custom port should be included in the address, after a colon. Example:

http://192.168.1.200

Note: Network transmission speed is dependant on bandwidth settings.

Note: Resolution and quality of the transmitted picture depends on settings in the SUB-STREAM in the menu for auxiliary stream, and recording settings for the main stream.

OPERATING THE DVR USING IE BROWSER

If a given address is a proper one and destination device is reachable, the logging window will be displayed:

User requires entering a proper user name (having sufficient privileges to connect to the DVR via network).

Password requires entering the DVR's network password. Default values are **admin** and „**123456**".

Successful authorization establishes a connection to the DVR, displaying live view images on the monitor screen.

ActiveX applet is downloaded during connection establishment, responsible for picture displaying.

Depending on security settings, accepting certain Active X formats may be required (click *Install*) or change browser security settings, e.g. adding address to trusted www sites.

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OPERATING THE DVR USING IE BROWSER

7.3.   Interface overview during live view.
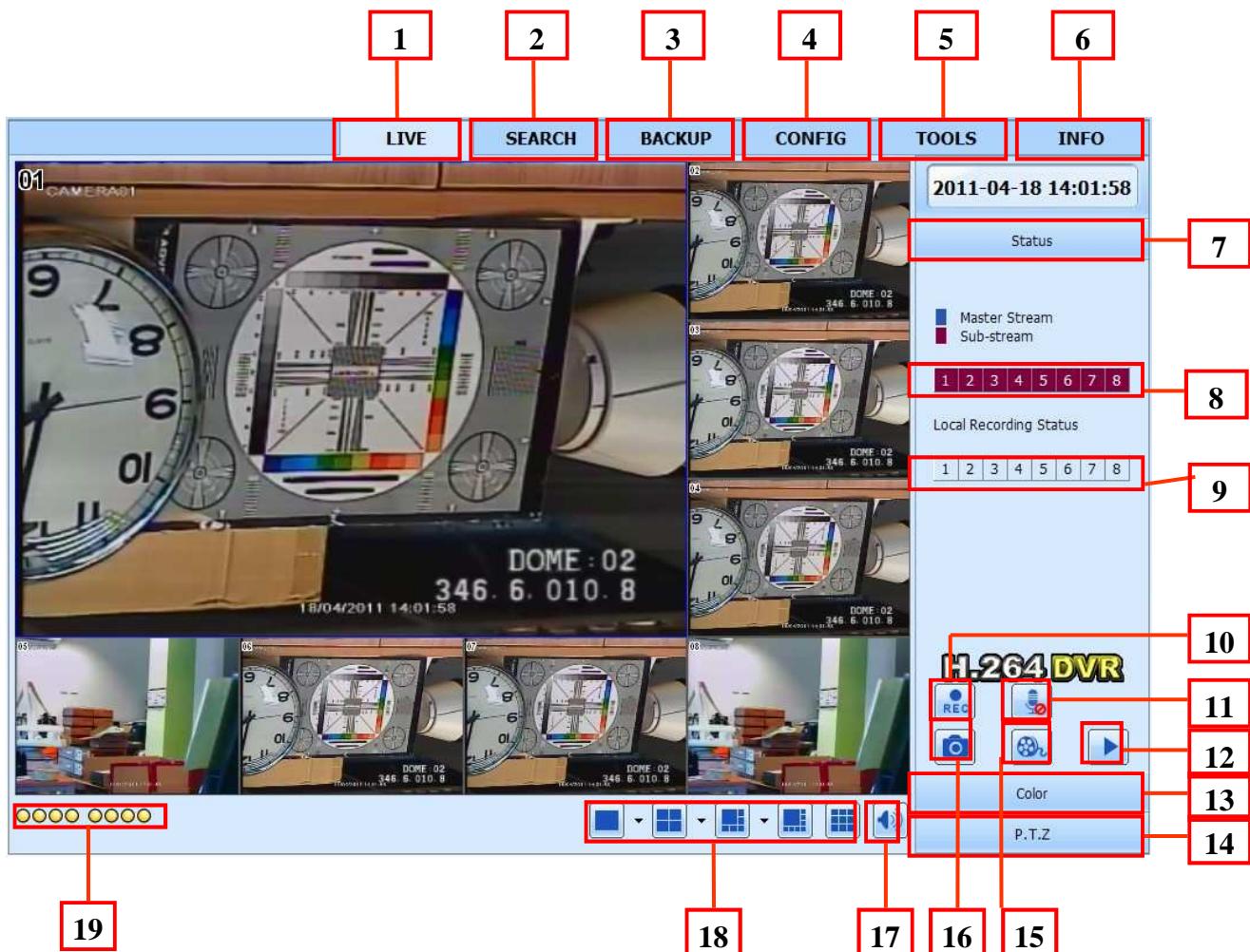
1. Live camera view.
2. Remote search and playback of the recordings.

OPERATING THE DVR USING IE BROWSER

7.4.   Interface overview in search and playback mode.
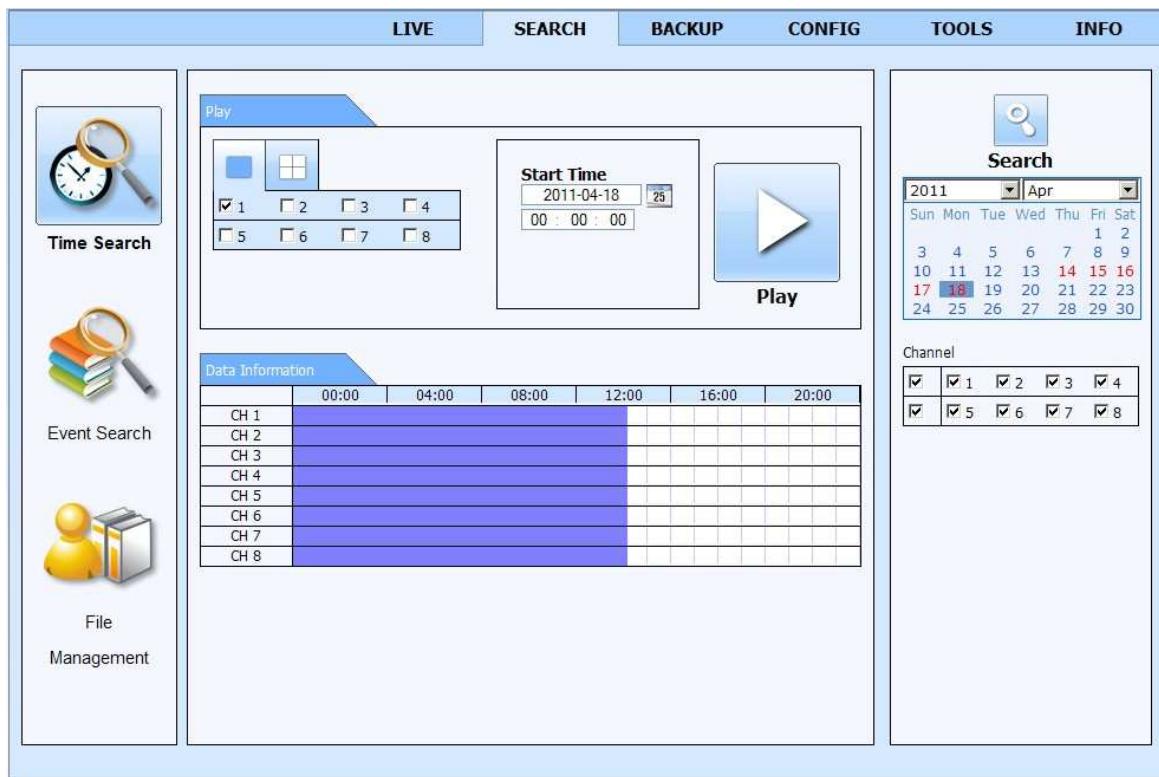
Handling the interface is performed in a similar fashion as described in chapter 5.2 /p. 50 of this manual.

To run playback please enter the date and time in the *START* field and press *PLAY*. Up to 4 channels may be played back simultaneously.

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7.5.   Interface overview in backup mode.

Handling the interface is performed in a similar fashion as described in chapter 5.3 /p. 51. of this manual.

Timeframe of the record should be set using calendar, so should be its starting and ending point, and channels to be included.   Clicking *SEARCH* displays file list, in accordance with specified search parameters, while double-click starts the playback.
Bottom left part of the screen contains information on the number of pages containing files found. To move to the next page or return to previous, please press the right/left arrows.

To copy the recordings, please select desired files and enter a path for them. *. avi files playback requires earlier installation of the codec provided by the DVR.

OPERATING THE DVR USING IE BROWSER

7.6.   Interface overview in configuration mode.
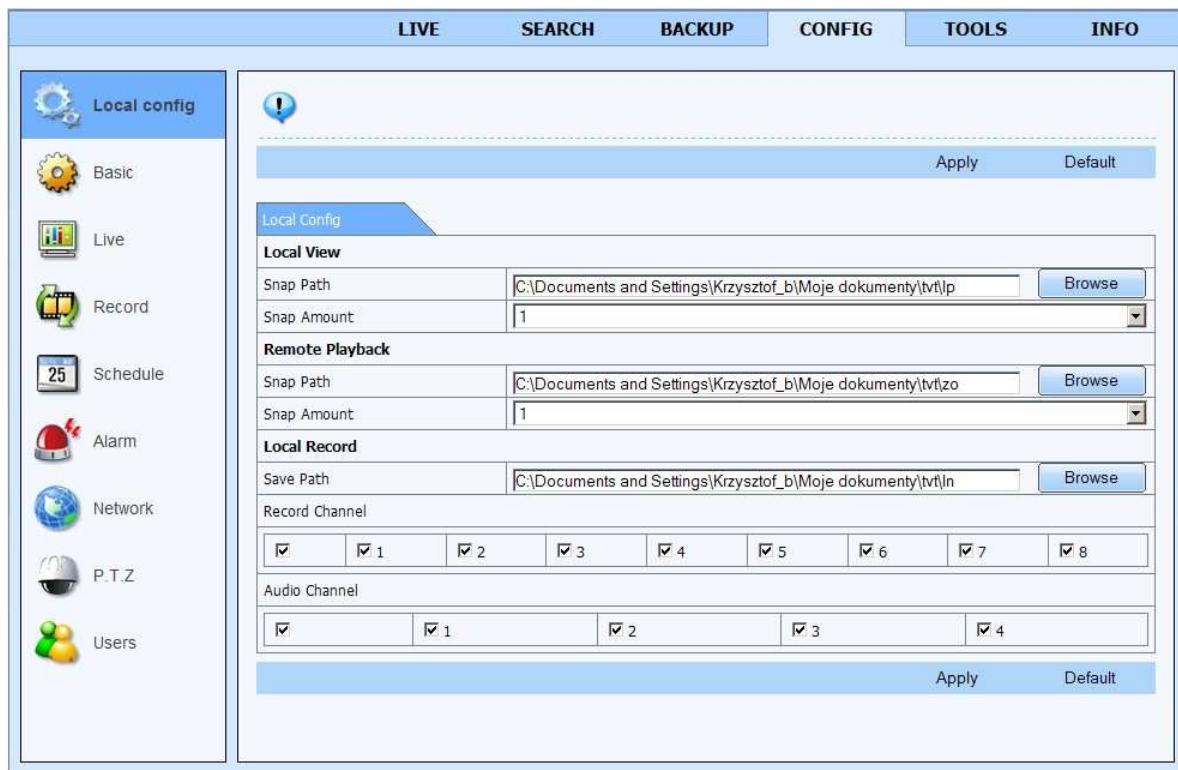
Handling the interface is performed in a similar fashion as described in chapter 5.1 /p. 23 of this manual.

Local setup is responsible for setting paths both for saved video files and snapshots, as well as selection of audio/video channels for local storage.

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7.7.   Interface overview in tools mode.
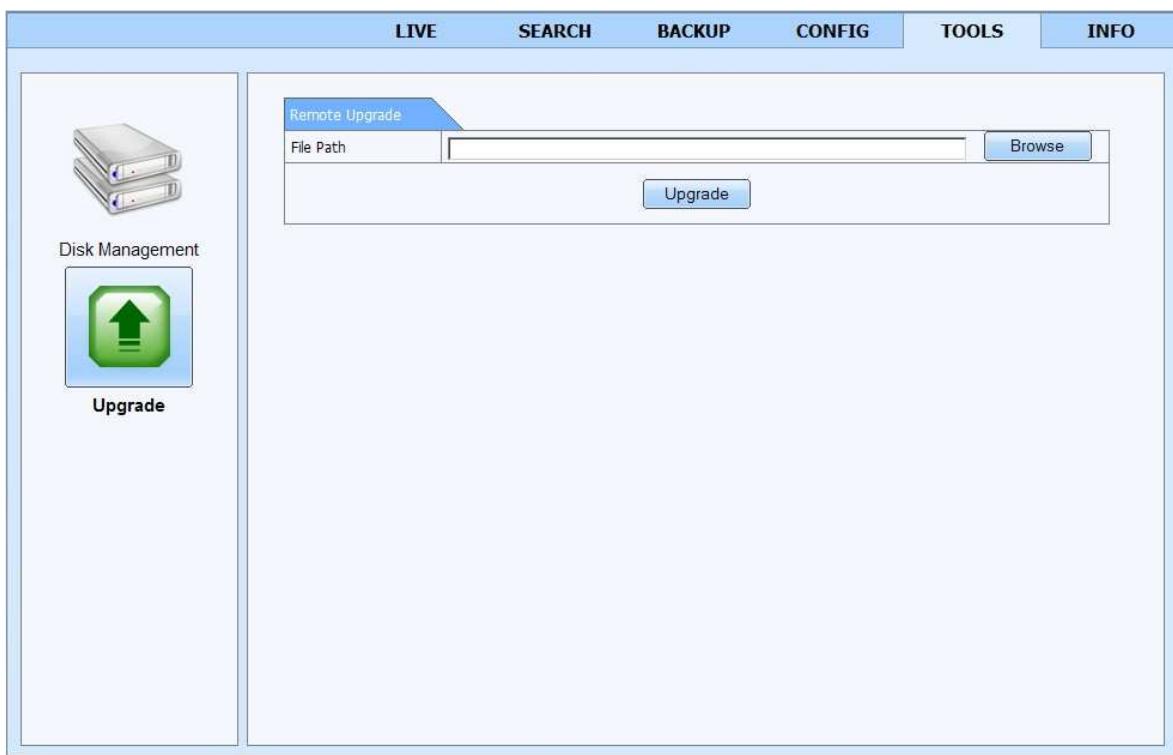
Disk Manager contains information about HDD of the DVR.

Upgrade allows to remotely upgrade DVR's firmware.
In order to upgrade firmware please specify the location containing appropriate firmware *.tar file and press the *Upgrade* button.

Note: Software file must be appropriate for the upgraded DVR!

After finishing update, system restarts and its settings are reverted to factory defaults. VGA output becomes primary for the DVR, to switch OSD display to BNC output please press and hold *ESC* for three seconds.

Note: Disconnecting power from the system during upgrade is forbidden. Interruption of process may damage DVR's main board. AAT Holding sp. z o.o. doesn't bear responsibility for device damage resulting from system upgrade process.

OPERATING THE DVR USING IE BROWSER

7.8. **Interface overview in the information mode.**

Handling the interface is performed in a similar fashion as described in chapter 5.4 /p 52 of this manual.

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8. CONNECTING PTZ CAMERAS

Evix ER-401, ER-801 DVRs may support up to 8 PTZ cameras (depending on the model) via RS-485 bus, connected in cascade topology. These can be either PTZ cameras, motor-zoom cameras, or ones with digital zoom. Camera control may be performed either via front panel buttons, IR remote controller, USB mouse, CMS software or via IE web browser. In order to successfully control cameras, unique addresses (IDs) need to be assigned to each one of them.

DVRs feature embedded control protocols, such as N-Control, Pelco-D, Pelco-P and many more.

Note: Every camera in a single system should use the same protocol and baud rate (consult your PTZ camera manual).

**Connecting the Novus PTZ cameras.**

PTZ cameras should be connected in cascade using CAT 5 UTP cable. They should be connected to appropriate ports of the **RS-485 +Y -Z** clamp terminal. Maximum length of the bus should not exceed 1200m.

Telemetry connector is designed as a clamp terminal block. Lead-outs should be connected to cameras as depicted below:
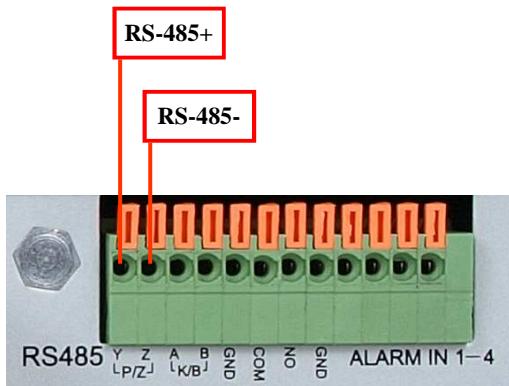
ER-401:   ER-801:
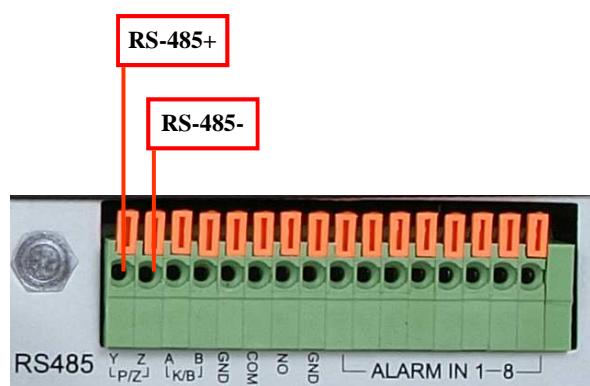
Detailed information on DVR menu settings regarding PTZ camera control are available in chapter 5.1.8, page 47.

Controlling cameras using mouse is described in chapter 6.4, page 60.

CONNECTING PTZ CAMERAS

Evix ER-401

Novus CAMA III
no. 1

Novus CAMA III
no. 4

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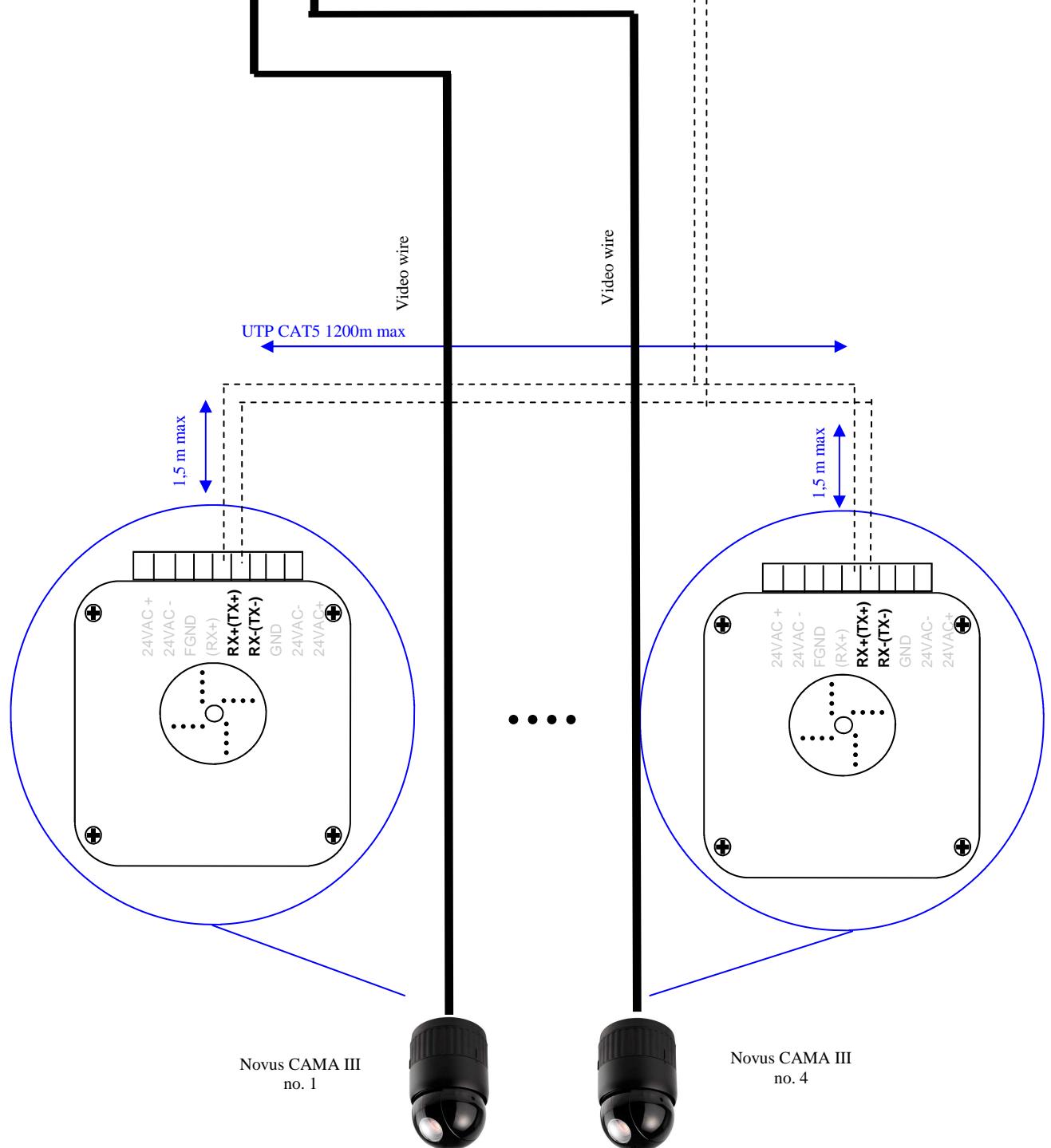
CONNECTING PTZ CAMERAS

Evix ER-801

Novus CAMA III
no. 1

Novus CAMA III
no. 8

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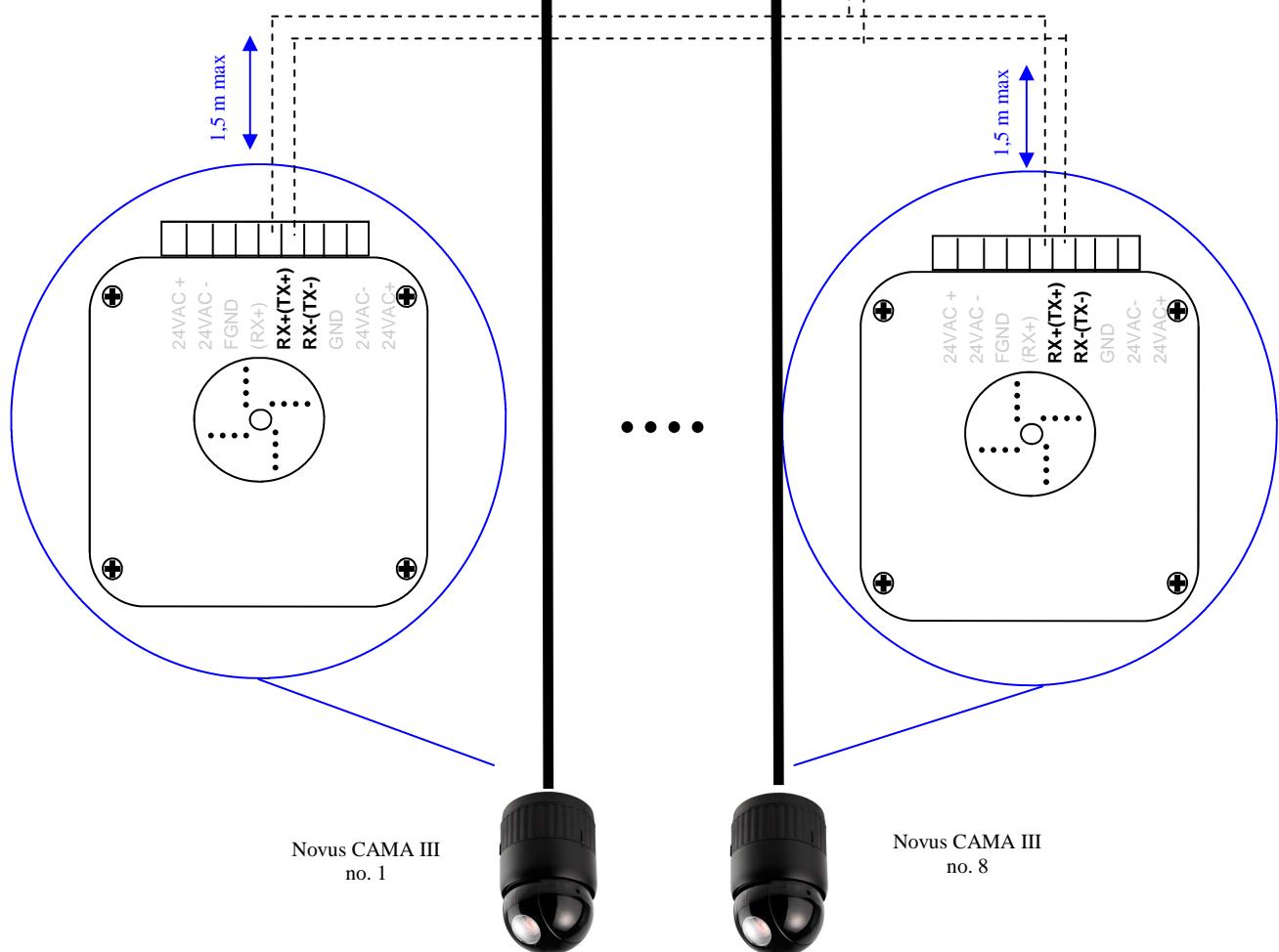
9. CONNECTING PERIPHERALS TO ALARM IN/OUTS

ER-401, ER-801 feature up to 8 alarm inputs and 1 alarm relay output. Precise number of inputs for each DVR is stated in technical specification.

Terminal blocks are equipped with clamps in order to facilitate wiring. Detailed placement of rear panel connectors are described in chapter 2.4.

Note: Both inputs and output are not protected from results of atmospheric discharges. User should take appropriate measures to protect inputs/outputs from voltage surges that may damage the DVR.

Note: Alarm outputs are not protected from overload. User should protect them using additional means.

Maximum current for relay output should not exceed 0,5A for 125VAC or 1A for 24VDC. If system needs connecting devices with bigger current demand, please use additional circuits, e.g. utilizing relay.

Examples of alarm inputs/outputs circuits:

Alarm inputs are voltage sensitive, therefore shorting them with ground activates them.

- Typical alarm input circuit
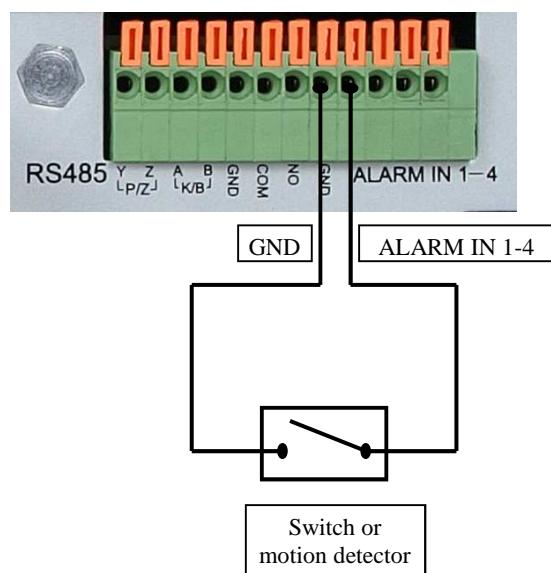
CONNECTING PERIPHERALS TO ALARM IN/OUTS

- Typical relay output circuit:
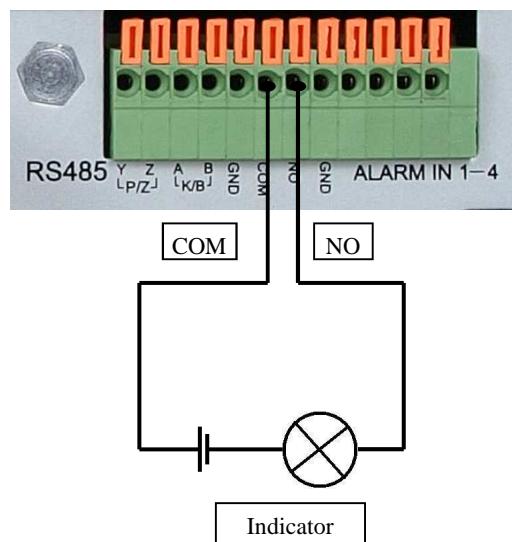
10. USING THE SUPERPLAYER SOFTWARE

Super Player software is responsible for handling the *.dat files containing recordings, that are created by the DVR. Software plays recordings either from a connected USB pendrive or from an HDD connected via SATA interface.

10.1 Software installation

In order to start installing the Super Player please find the *SuperPlay.msi* file on an included CD or pendrive that was the storage device for recording backup. Launching the *SuperPlay.msi* starts installation. Installation can be interrupted in any moment by pressing *Cancel*.

Note:　　**If the software was already installed on a PC, please uninstall it first and install a new version.**

To follow the installation, please click *Next*, the software is then istalled using a default path.
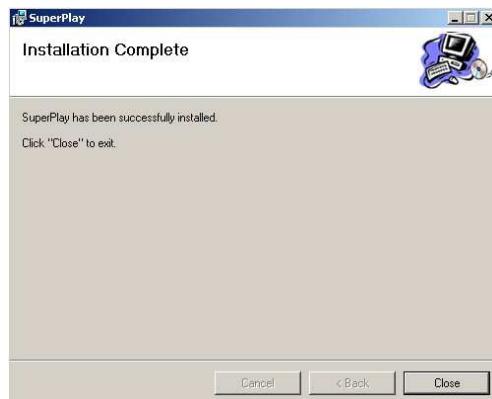
Please click *Close* after successfull installation.

USING THE SUPERPLAYER SOFTWARE

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10.2. Software overview.

Software is run using the [icon] shortcut available on the Desktop or the Programs menu.
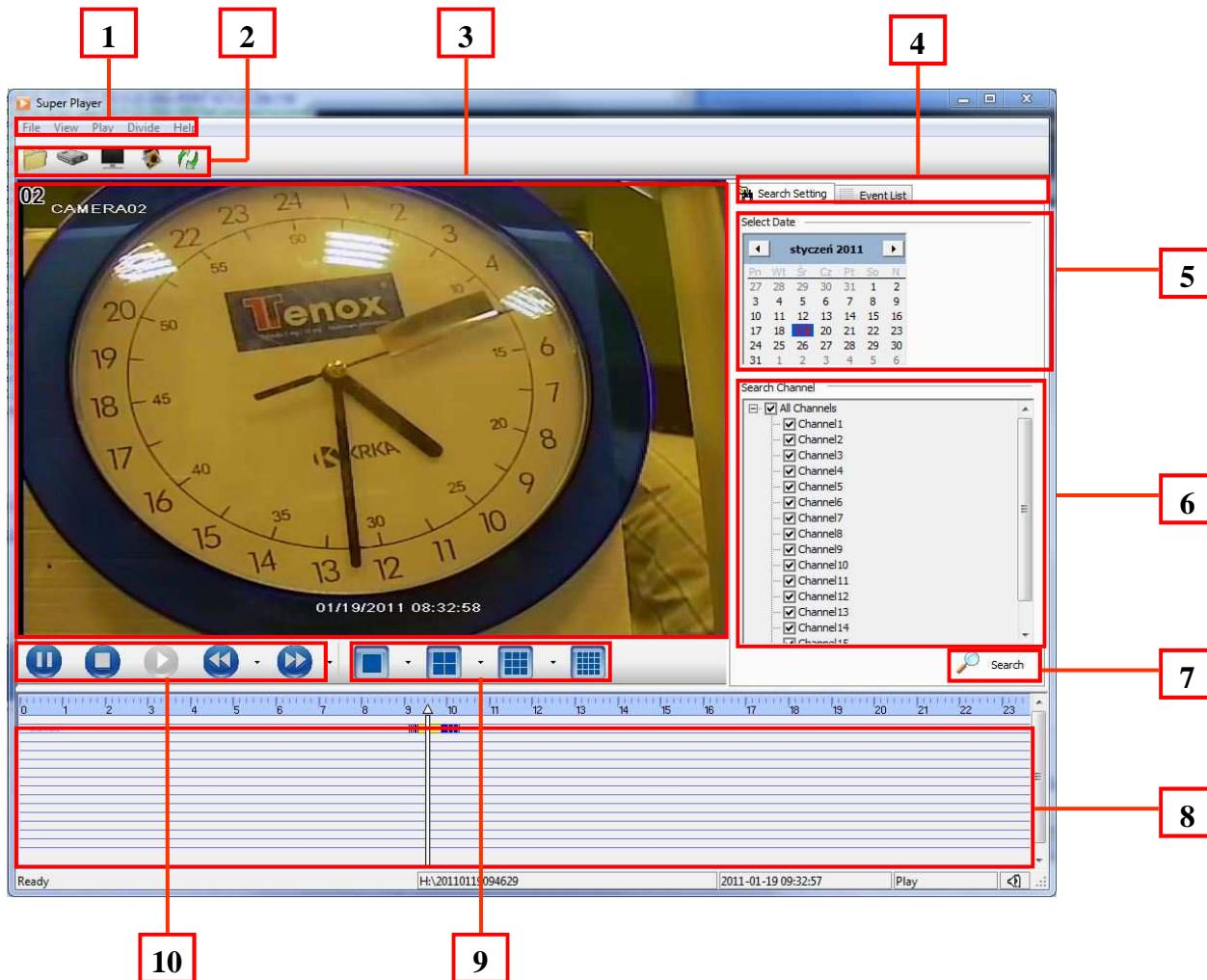
1. Main menu.

2. From left to right:

Open a directory - point to a *.dat backup file in order to open it.

Open an HDD - point to an HDD containing recordings from the DVR.

Fullscreen - displays camera images in full screen mode.

Snapshot - exports a camera snapshot or sequence of the images.

*. Avi conversion - converts a *.dat file into *.avi format.

**3.** surveillance window.

USING THE SUPERPLAYER SOFTWARE

4. Searches the recordings by date and time or by event.
5. Search calendar.
6. Channel search.
7. Starts search.
8. Graph representing records.
      Blue - schedule search.
      Green - manual search.
      Yellow - motion search.
      Red - alarm search.
9. Changes camera display mode.
10. Playback control.

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**ENGLISH LANGUAGE SETTING IN THE ER-401 AND ER-801 DVR's MENU.**

The procedure presented below shows how to go back to the English language in the Evix ER-401 and ER-801 DVRs menu in case of selecting any other language by mistake.

1. To open main menu press the **MENU** button on the DVR's front panel, and select the first position.

2. Next, select the first position.

3. Next, select the first position again.

APPENDIX 1

4. Choice the *English* language in the 8th menu position (third one from the bottom) .
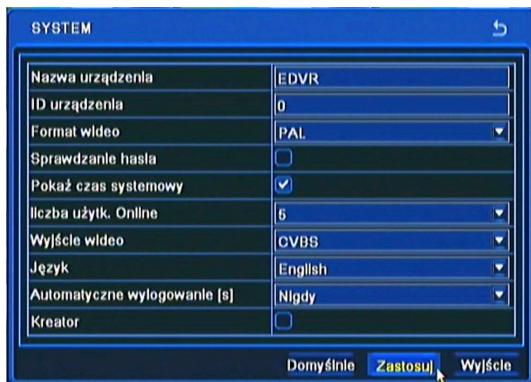
5. Next, click the middle one button, then the new interface language will be loaded.

EVIX®

We reserve the right to change tech parameters without prior notice

2011-06-15 V1.3